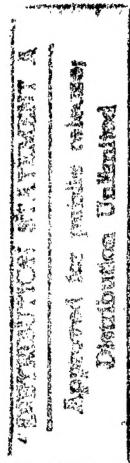


DEFENSE INFORMATION SYSTEMS AGENCY  
FY 1998/1999 BIENNIAL BUDGET ESTIMATE



RESEARCH, DEVELOPMENT, TEST  
AND EVALUATION (RD&E)  
APPROPRIATION

R-1, R-2, AND R-3 EXHIBITS

FEBRUARY 1997

19970314 075

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DEFENSE TECHNICAL INFORMATION CENTER  
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IN REPLY  
REFER TO DTIC-OCP (703) 274-6847 (DSN) 284-6847  
AQ M97-06 - 3979

SUBJECT: Request for Scientific and Technical Report

TO:

1. We have been unable to locate the report referenced below in the Defense Technical Information Center Collection. In accordance with DoDD 3200.12 "DoD Scientific and Technical Information Program" the Defense Technical Information Center is to receive two copies of the Technical Report cited below.
2. All copies of the report must be suitable for reproduction including a clearly marked distribution statement as described in DoDD 5230.24. (See reverse side for categories of distribution statement.) A clearly marked loan copy suitable for reproduction is acceptable.
3. If for any reason you cannot furnish the report, please return the copy of this letter annotating your reason on the reverse side.
4. A mailing label for shipping the reports and a DTIC Form 50 to obtain the AD number after processing are enclosed.

2 Encl

1. Mailing Label
2. DTIC Form 50

Chief, Programs  
Management Branch

TITLE: Def Info Sys Agency FY1998/1999 Biennal Budget  
Estimale Research, Dev, Test & Eval (RDT&E)  
Appropriation R-1, R-2, and R-3 Exhibits  
Feb 97

DEFENSE INFORMATION SYSTEMS AGENCY  
FY 1998/1999 BIENNIAL BUDGET ESTIMATE



RESEARCH, DEVELOPMENT, TEST  
AND EVALUATION (RD&T&E)  
APPROPRIATION

R-1, R-2, AND R-3 EXHIBITS

FEBRUARY 1997

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DEFENSE INFORMATION SYSTEMS AGENCY  
 FY 1998/1999 BIENNIAL BUDGET ESTIMATE  
 R-1 EXHIBIT

Program Element	FY 1996	FY 1997	FY 1998	FY 1999
0305108K C2 Research	1,705	1,814	1,937	2,013
<b>Total Applied Research (BA 2)</b>	<b>1,705</b>	<b>1,814</b>	<b>1,937</b>	<b>2,013</b>
0308045K C3 Interoperability	29,712	24,901	25,670	25,648
0302016K NMCS-Wide Support	1,995	1,978	2,064	2,099
0302019K Joint/Def. Info. Sys. Engin. & Integ.	3,622	4,468	4,721	4,971
0303126K Long Haul Communications	17,788	22,479	14,520	15,254
0303127K Support of the Nat. Comm. Sys. (NCS)	3,486	3,808	4,552	4,545
0303129K Defense Message System (DMS)	0	1,353	0	0
0303131K Min. Essent. Emerg. Comm. Netw. (MEECN)	2,620	2,110	2,381	2,450
0303149K C4I for the Warrior	0	2,851	0	0
0303153K Joint Spectrum Center	4,702	0	0	0
<b>Total Operational System Develop. (BA 7)</b>	<b>58,925</b>	<b>63,988</b>	<b>53,908</b>	<b>55,967</b>
<b>TOTAL DISA RDT&amp;E</b>	<b>60,630</b>	<b>65,802</b>	<b>55,845</b>	<b>57,980</b>

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DEFENSE INFORMATION SYSTEMS AGENCY (DISA)  
PROGRAM ELEMENT COMPARISON SUMMARY  
INTRODUCTION AND EXPLANATION OF CHANGES

1. General. This document has been prepared to provide summary information on the DISA Research, Development, Test and Evaluation Program to congressional committees during the FY 1998/1999 hearings. The R-2 and R-3 exhibits provide narrative information on DISA's RDT&E Program Elements and projects.
2. Comparison of FY 1996 and 1997 Data. A direct comparison of FY 1996 and FY 1997 data in the R-1 exhibit dated March 1996 will reveal only changes reflecting below threshold reprogrammings and Congressional action on the appropriation request.
3. Relationship of FY 1998/1999 Budget Structure to the FY 1997 Budget Approved by Congress. No change.
4. Classification. All exhibits in this document are unclassified.

RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)								DATE: February 1997					
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE									
RDT&E, Defense Wide/02				C2 Research/P.E. 0305108K									
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost			
Command and Control Research/A10	1.705	1.814	1.937	2.013	2.075	2.138	2.183	2.235	Contng	Contng			

A. Mission Description and Budget Item Justification:

This program element represents DISA's portion of a joint DISA/multi-service effort that supports research into emerging technologies, methodologies and theories of military command and control (C2), the application of research results to resolve the problems of C2 associated with joint operations and the optimal use of MILDEP laboratory resources. Accordingly, this program element is located in Budget Activity 02. The C2 research program was initiated to develop C2 as a scientific discipline, foster joint service techbase cooperation and demonstrations and develop a C2 curriculum for DOD.

The project supports command and control basic research and applied research. The project consists of research and studies for high level issues in command and control, and the development of curricula for National Defense University, Naval Post Graduate School and the Service War colleges. It addresses joint techbase issues including joint distributed ADP, Joint War Gaming, and technology sharing.

FY1996 Accomplishments

- o Continued coordinating and managing the Joint Service C3 Science and Technology Program, developing an annual Joint Service Plan for C3 Research. Supported the development and execution of the Deputy Director of Research and Engineering (DDR&E) Advanced Concepts Technology Demonstrations (ACTDs) using the Joint Warfare Information Demonstration (JWID) (\$210K) (AUG 96)
- o Continued development and demonstration within the Global Grid test bed environment of Multi-level security and data fusion (\$270K) (SEP 96)
- o Continued C3 Decision Aids and Data Fusion Symposia and the information exchange through Technical Panels for C3 (TPC3) subpanels. Formalized the expansion into the international arena. (\$405K) (SEP96)
- o Continued basic and applied research in C2 architecture's theory and analysis tools. Continued basic research in Conditional Event Probability Algebraic Logic (CEPAL) and its application to the C3 process (\$520K) (SEP 96)
- o Continued C2 curricula for National Defense University and other DOD schools and analysis and studies of high level C3 issues. (\$300K) (SEP 96) \$1.705M Total

Unclassified

APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/02							R-1 ITEM NOMENCLATURE C2 Research/P.E. 0305108K				DATE: February 1997	
RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)												
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost	Contg	Contg
Command and Control Research/A10	1.705	1.814	1.937	2.013	2.075	2.138	2.183	2.235	Contg	Contg		
<b>FY1997 Plans:</b>												
<ul style="list-style-type: none"> <li>o Continue coordinating and managing the Joint Service C3 Science and Technology Programs and developing an annual Joint Service Plan for C3 Research. Support development and execution of the Deputy Director of Research and Engineering (DDR&amp;E) Advanced Concepts Technology Demonstrations (ACTDS) using the Joint Warfare Information Demonstrations (JWID). (\$400K) (AUG 97)</li> <li>o Continue demonstrations within the Global Grid testbed environment of Distributed Computing Environment (DCE) capabilities in Multi-Media Security and fusion. Incorporate research into JWID arena for demonstration. (\$240K) (SEP 97)</li> <li>o Continue C3 Decision Aids and Data Fusion Symposia and the information exchange through the TPC3 subpanels. Formalize the expansion into the international arena. Hold first international Symposia in Europe. (\$315K) (AUG 97)</li> <li>o Continue basic and applied research in C2 architecture's theory and analysis tools. Continue basic research in Conditional Event Probability Algebraic Logic and its application to the C3 process. (\$509K) (SEP 97)</li> <li>o Continue C2 curricula for National Defense University and other DOD schools and analysis and studies of high level C3 issues (\$350K) (SEP 97)</li> </ul>												
<b>\$1.814M Total</b>												
<b>FY1998 Plans:</b>												
<ul style="list-style-type: none"> <li>o Continue C3 Decision Aids Data Fusion Symposia. Continue to formalize the international expansion of the Symposia effort. Host the second international C3 Symposia in Europe/UK. (\$400K) (JUNE/SEP 98)</li> <li>o Continue development of the C2 reference model and its application. (\$250K) (SEP 98)</li> <li>o Continue basic and applied research in C2 architecture's theory and analysis capability. Develop applications for analyses and tools. (\$550K) (JUNE 98)</li> <li>o Continue development of C2 and Information Warfare related curricula for National Defense University and other DOD schools. (\$393K) (SEP 98)</li> </ul>												

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<b>RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)</b>		DATE: February 1997								
<b>APPROPRIATION/BUDGET ACTIVITY</b> RDT&E, Defense Wide/02		<b>R-1 ITEM NOMENCLATURE</b> C2 Research/P.E. 0305108K								
COST (in millions)	FY96	FY97	FY98							
	FY99		FY00							
			FY01							
			FY02							
			FY03							
			Cost to Complete							
			Total Cost							
Command and Control Research/A10	1.705	1.814	1.937	2.013	2.075	2.138	2.183	2.235	Contng	Contg
<b>\$1.937M Total</b>										

**FY1999 Plans:**

- o Continue analysis and studies of C3 and Information Warfare high level issues. Continue with the establishment of the Advanced Concepts Technology (ACT) Program as the DOD center of excellence for lessons learned. (\$344K) (JUNE 98)
- o Continue analysis and studies of high level C3 and Information Warfare issues. (\$485K) (AUG 99) (\$2.013M Total)

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## RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

APPROPRIATION/BUDGET ACTIVITY  
RDT&E, Defense Wide/02

COST (in millions)

FY96

FY97

FY98

FY99

FY00

FY01

FY02

FY03

Cost to  
Complete

Contingency

APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/02							R-1 ITEM NOMENCLATURE		
							C2 Research/P.E. 0305108K		
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete
Command and Control Research/A10	1.705	1.814	1.937	2.013	2.075	2.138	2.183	2.235	Contingency

## B. Program Change Summary

	FY96	FY97	FY98	FY99
Previous President's Budget (FY 1997)		1.819	1.856	1.944
Appropriated Value		1.999	1.856	2.024
Adjustments to Appropriated Value		-.294	-.042	
Adjustments to Budget Year since FY 1997 President's Budget				
Current Budget Submit/President's Budget (FY 1998)	1.705	1.814	1.937	2.013

## Change Summary Explanation:

Funding: FY96 and FY97 reductions due to Congressional adjustment to Defense-wide Investment Appropriation and below threshold reprogramming.

## C. Other Program Funding Summary: N/A

## D. Schedule Profile

(U) FY1996

Contract/study delivered 2nd quarter FY96

(U) FY1997

Contract/study delivered 3rd quarter FY97

(U) FY1998

Contract/study delivered 3rd quarter FY98

(U) FY1999

Contract/study delivered 3rd quarter FY99

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DATE: February 1997

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APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/07								R-1 ITEM NOMENCLATURE C3 Interoperability 0208045K				DATE: February 1997	
RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)				R-1 ITEM NOMENCLATURE C3 Interoperability 0208045K								DATE: February 1997	
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost		
PE: 0208045K		24.712	24.941	25.670	26.648	28.227	29.867	30.509	31.205	Contng	Contng		
T20 Center for Standards		2.294	1.674	1.632	1.677	1.840	1.988	2.025	2.067	Contng	Contng		
T80 Technology Assessment and Insertion		.572	.550	.582	.598	.654	.707	.728	.751	Contng	Contng		
T30 Test and Evaluation		14.490	15.043	15.447	16.029	16.873	17.804	18.267	18.862	Contng	Contng		
T40 Major Range and Test Facility Base (MRTFB)		7.356	7.674	8.009	8.344	8.860	9.368	9.489	9.525	Contng	Contng		

## A. Mission Description &amp; Budget Item Justification:

To ensure interoperability and integration of Command, Control, Communications and Intelligence (C3I) systems through development and maintenance of a joint global architecture, interface and system standards, interface definitions, operational procedures and a test and certification program for C3 systems; and to function as an Operational Test Agency (OTA) to test/certify the Defense Information Systems Network (DISN), Defense Message System (DMS), and other strategic systems. This program element is under Budget Activity 07 because it involves efforts supporting operational systems development.

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/07										R-1 ITEM NOMENCLATURE C3 Interoperability 0208045K	
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
Center for Standards/T20		2.294	1.674	1.632	1.677	1.840	1.988	2.025	2.067	Contg	Contg
A. Mission Description & Budget Item Justification:											
<p>The Center serves as DOD Executive Agent for centralized management of Information Technology (IT) standards. The primary goal is to guide development of standards within DOD and encourage industry adoption of standards supporting DOD requirements. When commercially available standards exist, they will be adopted. The Center will manage development of DOD unique requirement efforts. The Center will also select candidate technologies for advanced technology demonstrations, and develop the roadmap and business case analyses for transitioning technologies into leading edge services.</p>											
(U) <u>FY 1996 Accomplishments:</u>											
<ul style="list-style-type: none"> <li>o Develop standards profile to support procurement of Defense Information Systems Network (DISN) (Sep 96; \$146K).</li> <li>o Approve MIL-STD-187-700B, which provides for selected standards to evolve the future Defense Information System (DIS) (Sep 96; \$52K).</li> <li>o Complete and approve Standard for Asynchronous Transfer Mode (ATM) on Network Node Interface (NNI) (Jun 96) and commence update of standard on ATM User Network Interface (Jul 96; \$52K).</li> <li>o Complete development of Trusted Networking Security Standards (Sep 96; \$100K).</li> <li>o Tailor Personal Communications Standards (PCS) to meet DOD needs (Sep 96; \$109K).</li> <li>o Complete development of Draft ATM over a Tactical Network Standard (Aug 96; \$150K).</li> <li>o Complete development of Data Communications Standards incorporating INTERNET Protocols (Sep 96; \$100K).</li> <li>o Complete development of Standards to support the use of Commercial SATCOM (Sep 96; \$75K).</li> <li>o Revise and distribute parts of Joint Pub 6-05 (Ongoing; \$150K).</li> <li>o Technical Standards support on Joint and Electronic Key Management Systems (Ongoing; \$85K).</li> <li>o Validation and approval of Electronic Data Interchange (EDI) and DODISS Compartmented Work Station Security Standards (Ongoing; \$150K).</li> <li>o Validation and approval of initial Tactical Messaging Standards and initial Thin Stack Standards (Ongoing; \$150K).</li> </ul>											

RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997	
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE						
					C3 Interoperability 0208045K						
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost	Contg
Center for Standards/T20	2.294	1.674	1.632	1.677	1.840	1.988	2.025	2.067	Contg	Contg	
(U) <u>FY 1996 Accomplishments (cont'd):</u>											
o Maintain and expand IT Standards Framework, establish a repository of certified DOD IT standards profiles, provide direct standards profile selection support for DOD system (1st Qtr - 4th Qtr; \$310K).											
o Design and develop advanced UHF SATCOM Modulation (AUSM) (1st Qtr - 4th Qtr; \$665K).											
\$2.294M Total											
(U) <u>FY 1997 Plans:</u>											
o Commence update of MIL-STD-187-700C for the DIS (1st Qtr - 4th Qtr; \$150K).											
o Technical Standards support on Joint and Electronic Key Management Systems (1st Qtr - 4th Qtr; \$85K).											
o Exploration into User/System Developer Standards Requirements (1st Qtr - 4th Qtr; \$186K).											
o Develop Multicasting Lower Layer 3 Routing Standards (1st Qtr - 4th Qtr; \$154K).											
o Enhance Lower Layer 4 Multicasting Standards (1st Qtr - 4th Qtr; \$105K).											
o Revise and distribute parts of Joint Pub 6-05 (1st Qtr - 4th Qtr; \$240K).											
o Complete development of ITU X.400 Key Protocol Standards (1st Qtr - 4th Qtr; \$74K).											
o Validation and approval of Tactical Messaging Standards and initial Thin Stack Standards (1st Qtr - 4th Qtr; \$110K).											
o Validation and approval of Tactical Directory Standard (1st Qtr - 4th Qtr; \$90K).											
o Maintain and expand IT Standards Framework, establish a repository of certified DOD IT standards profiles, provide direct standards profile selection support for DOD system (1st Qtr - 4th Qtr; \$480K).											
\$1.674M Total											

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RDTE&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)								DATE: February 1997			
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
RDTE&E, Defense Wide/07				C3 Interoperability 0208045K							
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost	Contg
Center for Standards/T20	2.294	1.674	1.632	1.677	1.840	1.988	2.025	2.067	Contg	Contg	
(U) <u>FY 1998 Plans:</u>	<ul style="list-style-type: none"> <li>o Develop ATM Network-to-Network Interface Standards Profile (1st Qtr - 4th Qtr; \$220K).</li> <li>o Development of SHF, UHF, and EHF SATCOM Standards (1st Qtr - 4th Qtr; \$550K).</li> <li>o Technical support of SATCOM STANAG development (1st Qtr - 4th Qtr; \$193K).</li> <li>o Technical support to NATO TACOMS 2000 (1st Qtr - 4th Qtr; \$200K).</li> <li>o Technical support to message (1st Qtr - 4th Qtr; \$150K).</li> <li>o Technical support to PM-EC/EDI (1st Qtr - 4th Qtr; \$150K).</li> <li>o Development of standards for Digitized Battlefield (1st Qtr - 4th Qtr; \$100K).</li> <li>o DOD technical requirements for Internet Engineering Task Force (1st Qtr - 4th Qtr; \$69K).</li> </ul>										
	<p>\$1.632M Total</p>										
(U) <u>FY 1999 Plans:</u>	<ul style="list-style-type: none"> <li>o Develop ATM Network-to-Network Interface Standards Profile (1st Qtr - 4th Qtr; \$220K).</li> <li>o Development of SHF, UHF, and EHF SATCOM Standards (1st Qtr - 4th Qtr; \$540K).</li> <li>o Technical support of SATCOM STANAG development (1st Qtr - 4th Qtr; \$200K).</li> <li>o Technical support to NATO TACOMS 2000 (1st Qtr - 4th Qtr; \$200K).</li> <li>o Technical support to PM-DMS (1st Qtr - 4th Qtr; \$150K).</li> <li>o Technical support to PM-EC/EDI (1st Qtr - 4th Qtr; \$150K).</li> <li>o Development of standards for Digitized Battlefield (1st Qtr - 4th Qtr; \$100K).</li> <li>o DOD technical requirements for Internet Engineering Task Force (1st Qtr - 4th Qtr; \$117K).</li> </ul>										
	<p>\$1.677M Total</p>										

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/07					R-1 ITEM NOMENCLATURE C3 Interoperability 0208045K							
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost	
Center for Standards/T20		2.294	1.674	1.632	1.677	1.840	1.988	2.025	2.067	Contng	Contng	
B. Program Change Summary:												
Previous President's Budget (FY97)												
Appropriated Value												
Adjustments to Appropriated Value												
Adjustments to Budget Year Since FY97 President's Budget												
Current Budget Submit/President's Budget (FY98)												
Change Summary Explanation:												
FY96 and FY97 increase is due to below threshold reprogramming.												
FY98 and FY99 reductions due to revised fiscal guidance.												
C. Other Program Funding Summary:												
O&M												
D. Schedule Profile:												
FY 1996	3rd Qtr: EC/EDI Standard 4th Qtr: MIL-STD-188-220 (Revised Combat Net Radio Standard) DISN Profile											
FY 1997	1st Qtr: UHF SATCOM 5KHz DAMA Waveform Standard (Voice) 2nd Qtr: Revised X.500 PICS for Directory Services											

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE: February 1997		
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE					
RDT&E, Defense Wide/07				C3 Interoperability 0208045					
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete
Center for Standards/T20	2.294	1.674	1.632	1.677	1.840	1.988	2.025	2.067	Contg
D. Schedule Profile (cont'd):									Contg
<u>FY 1997</u> (continued)									
3rd Qtr:	EHF SATCOM Medium Data Rate (MDR) Data Link Standard, Revision A								
4th Qtr:	SHF SATCOM Message Format Standard								
<u>FY 1998</u>	All Qtrs:	Develop VTC Standards Profile for ATM Networks							
	2nd Qtr:	Internet RFC on Common Security Labeling, Internet RFC on COUL Protocol							
	3rd Qtr:	UHF SATCOM Data Control Standard, Revision A							
	4th Qtr:	EHF SATCOM Low Data Rate Data Link Standard, Revision E							
<u>FY 1999</u>	All Qtrs:	Develop VTC Standards Profile for LANs and Internet and Mobile Cellular Radios							
	1st Qtr:	Internet Draft on Quality of Service additions to IP layer protocols							
	2nd Qtr:	Internet RFC on Mobile AdHoc Networking							
	3rd Qtr:	Advanced EHF SATCOM Standard							

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RDTE&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)		DATE: February 1997									
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE									
RDTE&E, Defense Wide/07		C3 Interoperability 0208045K/Center for Standards/T20									
A. Project Cost Breakdown: (\$000)		<u>FY96</u>	<u>FY97</u>								
Systems Engineering	2,294	1,674	1,632								
B. Budget Acquisition History and Planning Information:		<u>FY98</u>	<u>FY99</u>								
Support and Management Organizations		1,674	1,677								
Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Prior to FY96	Budget FY96	Budget FY97	Budget FY98	Budget FY99	Budget to Complete FY99	Total Program Contng
LOGICON	C/CPFF	08/91	12,490	12,490	4,340	1,520	1,250	1,147	1,181	Contng	Contng
All Other Contracts						774	424	485	496	Contng	Contng
SUBTOTAL CONTRACTS						2,294	1,674	1,632	1,677		
In House Engineering & Technical Support: N/A											
TOTAL PROJECT						2,294	1,674	1,632	1,677		

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE: February 1997		
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE					
RDT&E, Defense Wide/07				C3 Interoperability 0208045K					
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete
Technology Assessment and Insertion/T80	.572	.550	.582	.598	.654	.707	.728	.751	Contg
									Contg

A. Mission Description & Budget Item Justification:

This project continues to plan and promote an expeditious and cost effective development of needed information technology capabilities by targeting R&D efforts to DOD mission needs and leveraging on DOD and industry developments. It provides for the transition of new technologies into leading edge and core information services.

(U) FY 1996 Accomplishments:

- o Engineering for Network Engineering Assessment Facility (NEAF) (1st Qtr - 4th Qtr; \$185K).
- o Engineering for ATM systems for Non-Secure Internet Protocol Router Network (NIPRNET) and Global Combat Support Systems (GCSS) (1st Qtr - 4th Qtr; \$387K).

\$ .572M Total

(U) FY 1997 Plans:

- o Engineering for NEAF (1st Qtr - 4th Qtr; \$200K).
- o Engineering for ATM systems for NIPRNET and GCSS (1st Qtr - 4th Qtr; \$350K).

\$ .550M Total

(U) FY 1998 Plans:

- o Engineering for NEAF (1st Qtr - 4th Qtr; \$200K).
- o Engineering for ATM systems for NIPRNET and GCSS (1st Qtr - 4th Qtr; \$382K).

\$ .582M Total

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997	
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
RDT&E, Defense Wide/07				C3 Interoperability 0208045K							
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to complete	Total Cost	Contng
Technology Assessment and Insertion/T80	.572	.550	.582	.598	.654	.707	.728	.751			

(U) FY 1999 Plans:

- o Engineering for NEAF (1st Qtr - 4th Qtr; \$200K).
- o Engineering for ATM systems for NIPRNET and GCSS (1st Qtr - 4th Qtr; \$398K).

\$ .598M Total

B. Program Change Summary:

	FY96	FY97	FY98	FY99
Previous President's Budget (FY97)	.571	.563	.584	.601
Appropriated Value	.954	.563		
Adjustments to Appropriated Value	-.382	-.013		
Adjustments to Budget Year Since FY97 President's Budget				
Current Budget Submit/President's Budget (FY98)	.572	.550	.582	.598
Change Summary Explanation:				

FY96 decrease due to Congressional adjustment to Defense-wide Investment Appropriation & below threshold reprogrammings.

FY97 decrease due to Defense-wide Investment Appropriation.

FY98-99 decrease due to revised fiscal guidance.

C. Other Program Funding Summary: N/A

D. schedule Profile:

(U) All Qtrs: Engineering for NEAF  
Engineering for ATM systems for NIPRNET and GCSS.

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RDTEC PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)		DATE: February 1997								
<b>APPROPRIATION/BUDGET ACTIVITY</b> RDT&E, Defense Wide/07		<b>R-1 ITEM NOMENCLATURE</b> C3 Interoperability 0208045K/Technology Assessment and Insertion/R80								
A. Project Cost Breakdown: (\$000)		<u>FY96</u> 572	<u>FY97</u> 550							
Systems Engineering		<u>FY98</u> 582	<u>FY99</u> 598							
B. <u>Budget Acquisition History and Planning Information:</u> Support and Management Organizations										
Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity <u>EAC</u>	Project Office <u>EAC</u>	Prior to <u>FY96</u>	Budget <u>FY97</u>	Budget <u>FY98</u>	Budget <u>FY99</u>	Budget to <u>Complete</u>	Total Program
All Other Contracts				572	550	582	598	Contg	Contg	
SUBTOTAL CONTRACTS										
In House Engineering & Technical Support: N/A										
TOTAL PROJECT										

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE : February 1997		
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE					
				C3 Interoperability 0208045K/Test and Evaluation/T30					
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Total Cost
T30 Test and Evaluation	14.490	15.043	15.447	16.029	16.873	17.804	18.267	18.862	Contg
									Contg

A. Mission Description & Budget Item Justification: Through effective life cycle test and evaluation (T&E), this project ensures that C3I and information systems (IS) developed by DOD Components are interoperable and permit flexible employment of forces throughout the world. T&E is performed throughout the entire life cycle including proof-of-concept, system development, system deployment, and system upgrade and modification. This T&E includes interoperability, performance, operational test and evaluation, systems effectiveness and force effectiveness testing of all C3I and IS system standards and system interfaces used in joint and combined operations.

(U) FY 1996 Accomplishments:

- o Provide independent operational evaluation and assessments of Defense Information Infrastructure (DII) programs, i.e., Defense Message System (DMS), Defense Information Systems Network (DISN), Global Command and Control System (GCCS) and Survivable Secure Communications Network (SSCN). (Sep 96, \$1446K).
- o Provide CINC interoperability testing and technical assistance; publish Lessons Learned Report sharing C4I problems, issues and solutions; (ongoing; \$649K).
- o Perform interoperability and technical testing for the following C4I/ITW system interfaces and standards; Defense Information Systems Network, Defense Message System, AN/USC-42 (Mini-DAMA), Military Strategic and Tactical Relay (MILSTAR) Satellite Program, Ultrahigh Frequency Satellite Terminal System, Global Grid, Asynchronous Transfer Mode (ATM), and multiple US command and control systems employing TADILS A/B/C/J, ATDL-1, USMFT and VMF standards (Ongoing, \$6249K).
- o Provide technical and operational fixes to interface and interoperability problems in a coordinated environment involving both the user and the developer/commercial vendor, provide the Commander in Chief Joint Task Force planner operational guidance in the planning, establishment and employment of tactical multi-service systems and the integration of these systems into the Strategic Network and Defense Information Infrastructure. Document critical C3 equipment strings (Sep 96, \$800K).
- o In conjunction with the Defense Information Systems Agency's mission to provide testing and associated training and implementation support for automated information systems and programs: BETA and interoperability Test and Evaluation of Service-unique and Defense Message System joint projects. Types of testing include hardware acceptance testing (HAT), quality acceptance testing (QA), interface/interoperability certification testing (ICT), software change proposal testing (SCP), security test and evaluation (ST&E) and DMS functional testing, (Ongoing, \$4503K).

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE : February 1997	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/07					R-1 ITEM NOMENCLATURE C3 Interoperability 0208045K/Test and Evaluation/T30						
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
T30 Test and Evaluation		14.490	15.043	15.447	16.029	16.873	17.804	18.267	18.862	Contg	Contg
<p>(U) <u>FY 1996 Accomplishments:</u> (Continued)</p> <ul style="list-style-type: none"> <li>o Test/evaluate/certify information transfer systems related to GCCS; ensure that GCCS provides quality command and control capability to the warfighter CINCs via timely and cost effective migration; (Sep 96, \$14,490M Total)</li> </ul> <p>(U) <u>FY 1997 Plans</u></p> <ul style="list-style-type: none"> <li>o Evaluate systems operational effectiveness and suitability for fielding for the following Defense Information Systems Agency oversight programs: Defense Message System, Global Command and Control System, and Defense Information Systems Network; (Sep 97, \$1979K).</li> <li>o Provide interoperability testing and technical assistance, publish Lessons Learned Report sharing C4I problems, issues and solutions; (Ongoing, \$584K).</li> </ul>											

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RDTE&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)								DATE: February 1997			
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				C3 Interoperability 0208045K/Test and Evaluation/T30			
RDT&E, Defense Wide/07		COST (in millions)		FY96		FY97		FY98		FY99	
T30 Test and Evaluation	14.490	15.043	15.447	16.029	16.873	17.804	18.267	18.862	19.267	19.862	20.267
A. Mission Description & Budget Item Justification: (Continued)											
(U) FY 1997 Plans (Continued)											
o Perform interoperability and technical testing for the following C4I/FTW system interfaces and standards: , Defense Information Systems Network (DISN) , AN-USC-42 (Mini-DAMA) , Military Strategic and Tactical Relay (MILSTAR) Satellite program, Ultrahigh Frequency Satellite Terminal System, Global Grid, Asynchronous Transfer Mode (ATM) , and multiple US command and control systems employing TADILS A/B/C/J, ATDL-1, USMTC and VMF standards; (Ongoing, \$5651K).											
o Provide technical and operational fixes to interface and interoperability problems in a coordinated environment involving both the user and the developer/commercial vendor, provide the Commander in Chief Joint Task Force planner operational guidance in the planning, establishment and employment of tactical multi-Service systems and the integration of these systems into the Strategic Network and Defense Information Infrastructure. Document critical C3 equipment strings; (Sep 97, \$778K).											
o In conjunction with the Defense Information Systems Agency's mission to provide testing and associated training and implementation support for automated information systems and programs: BETA and interoperability Test and Evaluation of Service-unique and Defense Message System joint projects. Types of testing include hardware acceptance testing (HAT) , quality acceptance testing (QA) , interface/interoperability certification testing (ICT) , software change proposal testing (SCP) , security test and evaluation (ST&E) and DMS functional testing; (Ongoing, \$4943K).											
o Test/evaluate/certify information transfer systems related to GCCS; ensure that GCCS provides quality command and control capability to the warfighter CINCs via timely and cost effective migration; (Sep 97, \$958K).											
o Assesses CINCs intelligence systems interoperability initiatives; (Sep 97, \$150K).											
\$15.043M Total											
(U) FY 1998 Plans											
o Test and Evaluation of DODs' major C4I programs--Defense Message System (DMS) , Global Command and Control System (GCCS) , Global Combat Support System (GCSS) , and Defense Information Systems Network (DISN) by certifying that critical requirements are supported by interoperable functionalities. Evaluate systems' operational effectiveness and suitability for fielding by documenting critical operational issues through an appropriate test, and referring results to the decision authority; (Ongoing; \$6096K) .											

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## RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

DATE: February 1997

APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE									
RDT&E, Defense Wide/07		C3 Interoperability 0208045K/Test and Evaluation/T30									
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
T30 Test and Evaluation		14.490	15.043	15.447	16.029	16.873	17.804	18.267	18.862	Contg	Contg
(U) FY 1998 Plans (Continued)											

- o C4I Technical Support to the Warfighter--Provide technical and operational support and expertise to CINCs, Services and Agencies during exercises (e.g., RIMPACT, Unified Endeavor, Internal Look, Roving Sands, etc.) real world contingencies (e.g., Joint Endeavor in Bosnia) and operational assessments. Provide Lessons Learned Report on NIPRNET/SIPRNET addressing current interoperability problems and solutions; (Ongoing; \$1525K).
- o Joint C4I Interoperability Test and Certification--Support production decisions of the Defense Acquisition Board (DAB) and fielding decisions of the Chairman, Joint Chiefs of Staff (CJCS) by providing test, evaluation and certification of C4I systems to ensure interoperability within and between systems, the sustaining base, the National Command Authority, and Service echelons and allies. Systems tested include High Frequency Automatic Link Establishment (HF/ALE), Ultra-High Frequency Demand Access Multiple Assignment (UHF DAMA), Universal Modem System, High Frequency Radio, Facsimile, Theater Deployable Communications (TDC), Tactical Data Link (TADIL A, B, J), Integrated Tactical Warning and Attack Assessment (ITWAA); (Ongoing; \$7826K).

§15.447M Total

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## RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

APPROPRIATION/BUDGET ACTIVITY  
RDT&E, Defense Wide/07

APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					
COST (in millions)					C3 Interoperability 0208045K/Test and Evaluation/T30					
	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
T30 Test and Evaluation	14.490	15.043	15.447	16.029	16.873	17.804	18.267	18.862	Contq	Contq

## A. Mission Description &amp; Budget Item Justification: (Continued)

## (U) FY 1999 Plans

- o Test and Evaluation of DODs' major C4I programs--Defense Message System (DMS), Global Combat Support System (GCSS), and Defense Information Systems Network (DISN) by certifying that critical requirements are supported by interoperable functional systems. Evaluate systems' operational effectiveness and suitability for fielding by documenting critical operational issues through an appropriate test, and referring results to the decision authority; (Ongoing, \$6417K).
- o C4I Technical Support to the Warfighter--Provide technical and operational support and expertise to CINCs, Services and Agencies during exercises (e.g., RIMPACT, Unified Endeavor, Internal Look, Roving Sands, etc.) real world contingencies (e.g., Joint Endeavor in Bosnia) and operational assessments. Provide Lessons Learned Report on NIPRNET/SIPRNET addressing current interoperability problems and solutions; (Ongoing, \$1604K).
- o Joint C4I Interoperability Test and Certification--Support production decisions of the Defense Acquisition Board (DAB) and fielding decisions of the Chairman, Joint Chiefs of Staff (CJCS) by providing test, evaluation and certification of C4I systems to ensure interoperability within and between systems, the sustaining base, the National Command Authority, and Service echelons and allies. Systems tested include High Frequency Automatic Link Establishment (HF/ALE), Ultra-High Frequency Demand Access Multiple Assignment (UHF DAMA), Universal Modem System, High Frequency Radio, Facsimile, Theater Deployable Communications (TDC), , Tactical Data Link (TADIL A,B,U), Integrated Tactical Warning and Attack Assessment (ITWAA) ; (Ongoing, \$8008K) .
- o \$16.029M Total

## B. Program Change Summary

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>
Previous President's Budget (FY 1997)	13.080	14.449	15.081	15.665
Appropriated Value	14.677	14.449		
Adjustments to Appropriated Value	-.187	.594		
Adjustments to Budget Year Since FY 1997 President's Budget				
Current Budget Submit/President's Budget (FY 1998)	14.490	15.043	.366	.364
Change Summary Explanation:		15.447	16.029	16.029

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997		
APPROPRIATION/BUDGET ACTIVITY										R-1 ITEM NOMENCLATURE		
RDT&E, Defense Wide/07										C3 Interoperability 0208045K/Test and Evaluation/T30		
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost	Contg	Contg
T30 Test and Evaluation	14.490	15.043	15.447	16.029	16.873	17.804	18.267	18.862				
B. Program Change Summary (Continued)												
Funding:	FY96-FY97 change is due to congressional adjustment to Defense Wide Appropriations and below threshold reprogramming. FY98-FY99 adjustment is due to revised fiscal guidance and realignment of funds.											
Schedule:	N/A											
Technical:	N/A											
C. Other Program Funding Summary:	N/A											

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)								DATE: February 1997			
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
RDT&E, Defense Wide/07				C3 Interoperability 0208045K/Test and Evaluation/T30							
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
T30 Test and Evaluation		14.490	15.043	15.447	16.029	16.873	17.804	18.267	18.862	Contg	Contg
D. Schedule Profile:											
(U) <u>FY 1996</u>											
<ul style="list-style-type: none"> <li>o 2nd Quarter - Independent Evaluation Report (IER) for Phase I DISN testing; DMS X.400 project; OT&amp;E of DISN Integrated Network Management System (INMS), GCCS and others.</li> <li>o 4th Quarter - Interoperability and technical testing for the following: GCCS, AN/USC-42 (Mini-DAMA), Ultra-High Frequency Satellite Terminal System, DISN, Global Grid, Asynchronous Transfer Mode (ATM), and multiple US command and control systems employing TADILS A/B/C/J, ARDL-1, USMTF and VHF standards.</li> </ul>											
(U) <u>FY 1997</u>											
<ul style="list-style-type: none"> <li>o 2nd Quarter - DMS X.400 project; OT&amp;E of DISN INMS, GCCS and others.</li> <li>o 4th Quarter - Interoperability and technical testing for the following: GCCS, AN/USC-42 (Mini-DAMA), Ultra-High Frequency Satellite Terminal System, DISN, Global Grid, Asynchronous Transfer Mode (ATM), and multiple US command and control systems employing TADILS A/B/C/J, ARDL-1, USMTF and VHF standards.</li> </ul>											
(U) <u>FY 1998</u>											
<ul style="list-style-type: none"> <li>o 2nd Quarter - DMS X.400 project; OT&amp;E of DISN INMS, GCCS and others.</li> <li>o 4th Quarter - Interoperability and technical testing for the following: GCCS, AN/USC-42 (Mini-DAMA), Ultra-High Frequency Satellite Terminal System, DISN, Global Grid, Asynchronous Transfer Mode (ATM), and multiple US command and control systems employing TADILS A/B/C/J, ARDL-1, USMTF and VHF standards.</li> </ul>											

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RDTE BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997	
APPROPRIATION/BUDGET ACTIVITY RDTE, Defense Wide/07					R-1 ITEM NOMENCLATURE C3 Interoperability 0208045K/Test and Evaluation/T30						
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
T30 Test and Evaluation	14.490	15.043	15.447	16.029	16.873	17.804	18.267	18.862	Contg	Contg	
(U) FY 1999											

o 2nd Quarter - DMS X.400 project; OT&E of DISN INMS, GCCS and others.

o 4th Quarter - Interoperability and technical testing for the following: GCCS, AN/USC-42 (Mini-DAMA), Ultra-High Frequency Satellite Terminal System, DISN, Global Grid, Asynchronous Transfer Mode (ATM), and multiple US command and control systems employing TADILS A/B/C/J, ATDL-1, USMTP and VHF standards.

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## RDT&amp;E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE: February 1997

APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE	
RDT&E, Defense Wide/07		C3 Interoperability 0208045K/Test and Evaluation/T30	
<b>A. Project Cost Breakdown</b>		<u>FY96</u>	<u>FY97</u>
C3I Interoperability and Information Systems Testing		14,490	15,043
		<u>FY98</u>	<u>FY99</u>
		15,447	16,029
<b>B. Budget Acquisition History and Planning Information</b>			
Test and Evaluation Organization			
Contractor or	Contract	Performing	Project
Government	Method/Type	Activity	Office
Performing	Award or	EAC	EAC
Activity	Obligation		
	<u>Vehicle</u>	<u>EAC</u>	<u>EAC</u>
*LOGICON	08/91	12,252	11,856
*INTEROP	C-CPAF	08/91	12,870
+BDM	C-CPAF	08/91	11,880
+VALIDITY	C-T&M	10/91	3,769
All Other Contracts			
	Subtotal Contracts	40,366	7,865
In House Engineering & Technical Support			
	Subtotal In-House		
TOTAL PROJECT		14,490	15,043
*Current OMNIBUS contracts expire and new contracts awarded in 2nd quarter of FY 97.		15,447	16,029

\*Current OMNIBUS contracts expire and new contracts awarded in 2nd quarter of FY 97.  
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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)		DATE: February 1997									
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/07		R-1 ITEM NOMENCLATURE C3 Interoperability 0208045K/Major Range and Test Facility Base (MRTFB)									
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to complete	Total Cost
T40 Major Range and Test Facility Base (MRTFB)		7.356	7.674	8.009	8.344	8.860	9.368	9.489	9.525	Contg	Contg
<b>A. Mission Description &amp; Budget Item Justification:</b> This project provides resources to operate DISA's Joint Interoperability Test Command (JITC) which is a member of DOD's Major Range and Test Facility Base (MRTFB). Indirect operation/maintenance expenses, overall testbed improvement and modernization, and facility and logistics support are included in this project.											
(U) <u>FY 1996 Accomplishments:</u>		<ul style="list-style-type: none"> <li>o Develop automated systems to facilitate test and evaluation and maximize use of test assets; develop and enhance Corporate Database and other microcomputer applications to provide cost accounting reports to track and catalog customer expenses for internal and external processes and customer disclosure; continue to develop automated support for management of contracts, manpower and fiscal resources; provide base operations business support to JITC's testing mission; (Ongoing; \$1576K).</li> <li>o Maintain and operate the JITC test facilities at Fort Huachuca, AZ; VA and Cheltenham, MD for DOD use; (Ongoing, \$5780K).</li> </ul>									
\$7.356M Total											
(U) <u>FY 1997 Plans:</u>		<ul style="list-style-type: none"> <li>o Continue to refine the automated systems to facilitate test and evaluation and maximize use of test assets; Maintain the Corporate Database and other microcomputer applications to provide cost accounting reports to track and catalog customer expenses for internal and external processes and customer disclosure; continue to develop automated support for management of contracts, manpower and fiscal resources; provide base operations business support to JITC's testing mission; (Ongoing; \$1921K).</li> <li>o Maintain and operate the JITC test facilities at Fort Huachuca, AZ; VA and Cheltenham, MD for DOD use; (Ongoing, \$5753K).</li> </ul>									
\$7.674M Total											
(U) <u>FY 1998 Plans:</u>		<ul style="list-style-type: none"> <li>o Recurring maintenance of JITC's automated systems to facilitate test and evaluation and maximize use of test assets; Maintain the Corporate Database and other microcomputer applications to provide cost accounting reports to track and catalog customer expenses for internal and external processes and customer disclosure; continue to develop automated support for management of contracts, manpower and fiscal resources; provide base operations business support to JITC's testing mission; (Ongoing, \$1921K).</li> </ul>									
\$7.674M Total											

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RDTE BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997
APPROPRIATION/BUDGET ACTIVITY										R-1 ITEM NOMENCLATURE
RDTE, Defense Wide/07										C3 Interoperability 0208045K/Major Range and Test Facility Base (MRTFB)
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
R40 Major Range and Test Facility Base (MRTFB)	7.356	7.674	8.009	8.344	8.860	9.368	9.489	9.525	Contg	Contg
<b>A. Mission Description &amp; Budget Item Justification: (Continued)</b>										
(U) <b>FY 1998 Plans:</b> (Continued)										
o Maintain and operate the JITC test facilities at Fort Huachuca, AZ; VA and Cheltenham, MD for DOD use; (Ongoing, \$2500K).										
o Indirect testing mission support; (Ongoing; \$3588K).										
\$8.009M Total										
(U) <b>FY 1999 Plans:</b>										
o Recurring maintenance of JITC's automated systems to facilitate test and evaluation and maximize use of test assets; Maintain the Corporate Database and other microcomputer applications to provide cost accounting reports to track and catalog customer expenses for internal and external processes and customer disclosure; continue to develop automated support for management of contracts, manpower and fiscal resources; provide base operations business support to JITC's testing mission; (Ongoing, \$1921K).										
o Maintain and operate the JITC test facilities at Fort Huachuca, AZ; VA and Cheltenham, MD for DOD use; (Ongoing, \$2610K).										
o Indirect testing mission support; (Ongoing; \$3813K).										
\$8.344M Total										
<b>B. Program Change Summary</b>										
	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>						
Previous President's Budget (FY 1997)	7.356	7.674	8.009	8.344						
Appropriated Value	7.948	7.674								
Adjustments to Appropriated Value	-5.92									
Adjustments to Budget Year Since FY 1997 President's Budget										
Current Budget Submit/President's Budget (FY 1998)	7.356	7.674	8.009	8.344						

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## RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

DATE: February 1997

APPROPRIATION/BUDGET ACTIVITY  
RDT&E, Defense Wide/07R-1 ITEM NOMENCLATURE  
C3 Interoperability 0208045K/Major Range and Test Facility  
Base (MRTFB)

COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
T40 Major Range and Test Facility Base (MRTFB)	7.356	7.674	8.009	8.344	8.860	9.368	9.489	9.525	Contg	Contg

Change Summary Explanation: FY96 change is due to congressional adjustment to Defense Wide Appropriations and below threshold reprogramming.

C. Other Program Funding Summary: N/A

D. Schedule Profile Milestones

(U) FY 1996 through FY 1999

1st-4th Quarter - BOS and RPMAR and Corporate MIS Database; business process review and improvement; test infrastructure

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RDTE & E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)		DATE: February 1997	
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE	
RDTE, Defense Wide/07		C3 Interoperability 0208045K/Major Range and Test Facility Base (MRTFB)	
A. Project Cost Breakdown (\$000)		FY96	FY97
a. Improvement and Modernization (I&M)		651	612
b. Base Operating Support (BOS)		891	927
c. Other Institutional Expenses		5,814	6,135
<b>TOTAL:</b>		<b>7,356</b>	<b>7,674</b>
		FY98	FY99

B. Budget Acquisition History and Planning Information						
Contractor or Government Activity	Contract Method/Type	Award or Obligation Date	Performing Activity	Project Office EAC	Prior to FY96	Budget FY96
*LOGICON/VALIDITY	C-CPAF	08/91	8,545	8,545	0	748
*INTEROP	C-CPAF	08/91	9,443	9,443	7,257	2,186
*BDM	C-CPAF	08/91	8,145	8,145	0	749
			Subtotal Contracts		2,186	2,245
					2,300	2,395
			In House Engineering & Technical Support			
			Subtotal In-House		5,170	5,429
					5,709	5,949
			TOTAL PROJECT		7,356	7,674
					8,009	8,344

\*Current OMNIBUS contracts expire and new contracts awarded in 2nd quarter of FY 97.

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## RDTE BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

DATE: February 1997

APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE									
RDTE, Defense Wide/07		National Military Command System (NMCS)-Wide Support/0302016K									
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
Total Program Element (PE)	Cost	1.995	1.978	2.064	2.099	2.214	2.329	2.379	2.476	Contg	Contg
NMCS Subsystem Engineering/T50		.400	.367	.406	.431	.511	.595	.609	.636	Contg	Contg
NMCS Command Center Engineering/S32		1.221	1.224	1.244	1.238	1.260	1.277	1.303	1.363	Contg	Contg
Support to Defense Support Activity (DSA)/Z60		.374	.387	.414	.430	.443	.457	.467	.477	Contg	Contg

## A. Mission Description and Budget Item Justification:

This program provides concept development, requirements definition, proof-of-principle experiments, rapid prototyping and technology insertions, technical specifications, systems engineering and integration, and technical assessments for NMCS Command and Control (C2) systems. This support provides informed, decision-making linkage between the National Command Authorities (NCA) and the Commanders-in-Chief (CINC) of the Unified and Specified Commands. Concentrating on the CINCs, this engineering draws upon improved C2 methodologies and technology insertion opportunities to meet the command, control and information system requirements of the CINCs for all crises and security threats involving US military forces. These efforts emphasize interoperability and are designed to contribute directly to the achievement of the global C4I infrastructure. This program element is under Budget Activity 07 because it involves efforts supporting operational systems development.

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)								DATE: February 1997			
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/07				R-1 ITEM NOMENCLATURE National Military Command System (NMCS)-Wide Support/0302016K							
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
NMCS Subsystem Engineering/T50		.400	.367	.406	.431	.511	.595	.609	.636	Contg	Contg

A. Mission Description & Budget Item Justification:

To accommodate rapid changes in requirements and increasing budget constraints, new approaches to reduce development and integration time, as well as costs for command and control systems must be sought. This project provides system engineering support to C4I information systems by developing near-term prototypes to satisfy CINC/Joint Task Force (JTF) operational requirements. Through this prototyping technical approach, operational requirements are assessed, system performance is measured, system interoperability is demonstrated and standard DISA products are premiered in an operational setting (Defense Message System (DMS), Global Command and Control System (GCCS), Global Combat Support System (GCSS), and Defense Information Infrastructure (DII)). The incorporation of prototypes into Joint Warrior Interoperability Demonstration (JWID) demonstrations and command exercises provides real-time assessment of technological advances and identifies interoperability problems and generates associated solutions. This approach also applies to assessing command center capabilities and the implications of DMS, GCCS and DII on future command center requirements.

(U) FY 1996 Accomplishments:

- o A prototype Special Operations Command Europe (SOCEUR) command and control configuration was operationally installed second quarter FY96. Enhancement to the IOC configuration will be implemented. This configuration supports the SOCEUR JTF from a headquarters as well as deployable perspective (Sep 96; \$100K).
- o A proof-of-concept Personal Digital Assistant prototype was introduced to EUCOM for use in Joint Endeavor. The prototype will be enhanced for operational use in deployment and redeployment planning (Jul 96; \$100K).
- o EUCOM Tiger Team report assessing baseline capabilities and implications of future C2 systems (Jul 96; \$75K).
- o ICELAND Defense Force, Combined Operations Center, Tiger Team (Sep 96; \$125K).

\$ 400M Total

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)								DATE: February 1997			
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/07				R-1 ITEM NOMENCLATURE National Military Command System (NMCS)-Wide Support/0302016K							
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
NMCS Subsystem Engineering/T50		.400	.367	.406	.431	.511	.595	.609	.636	Contg	Contg
(U) <u>FY 1997 Plans:</u>											
<ul style="list-style-type: none"> <li>o Integration of additional GCCS functionality, DMS and DII capabilities into JTF prototypes (Sep 97; \$95K).</li> <li>o Technical analysis for operational implementation of EUCOM's Soldier's Digital Assistant (SDA) concept (Nov 96; \$48K).</li> <li>o Assess CINC/JTF prototypes (with DMS, DII capabilities) during major exercises and demonstrations (Jun 97; \$48K).</li> <li>o EUCOM continued C2 systems integration for CINC/JTFs (Oct 96; \$73K).</li> <li>o Continued C2 systems integration for CINC/JTFs (Jun 97; \$103K).</li> </ul>											
<p>\$ .367M Total</p>											
(U) <u>FY 1998 Plans:</u>											
<ul style="list-style-type: none"> <li>o CINC/JTF prototype enhancements via integration of COTS/GOTS capabilities and emerging GCCS and DII technologies (Dec 98; \$306K).</li> <li>o Technology assessment of CINC/JTF prototypes (Aug 98; \$100K).</li> </ul>											
<p>\$ .406M Total</p>											
(U) <u>FY 1999 Plans:</u>											
<ul style="list-style-type: none"> <li>o Continuation of CINC/JTF prototype evolution including software and hardware technologies to enhance two-way communication with warfighter, command and control from the foxhole to the commander (Sep 99; \$431K).</li> </ul>											
<p>\$ .431M Total</p>											

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)								DATE: February 1997			
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/07				R-1 ITEM NOMENCLATURE National Military Command System (NMCS)-Wide Support/0302016K							
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
NMCS Subsystem		.400	.367	.406	.431	.511	.595	.609	.636	Contng	Contng
B. Program Change Summary:											
Previous President's Budget (FY97)											
Appropriated Value											
Adjustments to Appropriated Value											
Adjustments to Budget Year Since FY97 President's Budget											
Current Budget Submit/President's Budget (FY98)											
Change Summary Explanation:											
FY96 and FY97 change due to Congressional adjustment to Defense-wide investment appropriation.											
FY98 and FY99 adjustments due to revised fiscal guidance.											
C. Other Program Funding Summary:											
Related RDT&E: Program Element #0208045K, C3 Interoperability.											
D. Schedule Profile:											
<u>FY1996</u>	3rd Qtr:	EUCOM/Joint Endeavor SDA Engineering for GCCS-D									
	4th Qtr:	JWID 96 Engineering and Integration of SDA									
		SOCEUR Joint Special Operations Task Force (JSOTF) prototype enhancements									
		ICELAND Tiger Team - C2 system integration									
		EUCOM - C2 system integration for CINC/JTIDS									

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE : February 1997				
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/07				R-1 ITEM NOMENCLATURE National Military Command System (NMCS)-Wide Support/0302016K							
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
NMCS Subsystem Engineering/T50		.400	.367	.406	.431	.511	.595	.609	.636	Contg	Contg
FY1997	1st Qtr:	Technical analysis for operational implementation of EUCOM's SDA concept EUCOM - continued C2 system integration for CINC/JTFFs Continued C2 system integration for other CINC/JTFFs									
	3rd Qtr:	Assess CINC/JTF prototypes (with DMS, DII capabilities) during major exercises and demonstrations									
	4th Qtr:	Integration of additional GCSS functionality, DMS and DII capabilities into JTF prototypes									
FY1998	1st Qtr:	CINC/JTF prototype enhancements via integration of COTS/GOTS capabilities and emerging GCSS and DII technologies									
	4th Qtr:	Technology assessment of CINC/JTF prototypes									
FY1999	4th Qtr:	Continuation of CINC/JTF prototype evolution including software and hardware technologies to enhance two-way communications with warfighter, command and control from the foxhole to the commander									

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APPROPRIATION/BUDGET ACTIVITY		RDTEC PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)		DATE: February 1997	
RDT&E, Defense Wide/07		R-1 ITEM NOMENCLATURE National Military Command System (NMCS) -Wide Support/0302016K NMCS Subsystem Engineering/T50			
A. Project Cost Breakdown: (\$000)		<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>
Project Cost Categories					
a. Systems Engineering		400	367	406	431
TOTAL		400	367	406	431
B. Budget Acquisition History and Planning Information:					
Support and Management Organizations					
Contractor or Government Performing Activity	Contract Method/Type	Award or Obligation Date	Performing Activity	Project Office <u>EAC</u>	Budget <u>FY96</u>
Vehicle				<u>FY96</u>	<u>FY97</u>
Multiple Performing Activities	C/SS CPAF CPFF WR/PO			400	367
					406
					431
Government Furnished Property: N/A					
Total Project					
					400
					367
					406
					431

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RDTE & BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE: February 1997							
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE										
RDTE, Defense Wide/07				National Military Command System (NMCS)-Wide Support/0302016K										
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost				
NMCS Command Center Engineering/S32	1.221	1.224	1.244	1.238	1.260	1.277	1.303	1.363	Contdg	Contdg				

A. Mission Description and Budget Item Justification:

This project provides overall system engineering and technical integration activities for a broad spectrum of command center systems which provide the underpinning capabilities for the crisis/war decision-making processes of the National Command Authorities (NCA), the NMCS, and the Unified and Specified Commanders-in-Chief. Technical activities include requirements analysis, systems definition and engineering, and rapid prototyping. The project emphasizes the utilization of commercial-off-the-shelf (COTS) and emerging technologies for application in NMCS command centers in information processing and overall facility design to provide common solutions to theater, national, and world-wide crisis situations affecting the Department of Defense (DOD) and the Executive Office of the President.

(U) FY 1996 Accomplishments:

- o Technical analysis for implementation of improvements of National Airborne Operations Center (NAOC) and special Airlift Mission (SAM) aircraft (Sep 96; \$149K).
- o Engineering for implementation of an Airborne Communications Bus on Project Speckled Trout to interconnect mission equipment (Jun 96; \$200K).
- o Published Secretary of Defense Senior Leadership Communications Architecture (SLCA) (Aug 96; \$180K).
- o Engineering for qualitative operational test and evaluation of major NAOC improvements (Sep 96; \$65K).
- o Providing technical analysis of National Military Command Center (NMCC) and NMCC Site R operational requirements and development of engineering alternatives to improve strategic and crisis capabilities (Sep 96; \$140K).
- o Providing technical support for operational evaluation of FOC Special Technical Operations communications (May 96; \$132K).
- o Engineering for implementation of new consolidated red/black voice switching systems for NMCC and NMCC Site R (Sep 96; \$180K).
- o Integration engineering and transition planning for critical NMCC C3 systems in response to the new NMCC Pentagon renovation for design of facilities and communications systems (Sep 96; \$175K).

\$1.221M Total

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## RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/07							DATE: February 1997			
R-1 ITEM NOMENCLATURE National Military Command System (NMCS)-Wide Support/0302016K										
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
NMCS Command Center Engineering/S32	1.221	1.224	1.244	1.238	1.260	1.277	1.303	1.363	Contng	Contng
<b>(U) FY 1997 Plans:</b>										
<ul style="list-style-type: none"> <li>o Technical analysis for implementation of improvements to NAOC and SAM aircraft (Sep 97; \$98K).</li> <li>o Engineering support for qualitative operational test and evaluation of major NAOC improvements (Sep 97; \$73K).</li> <li>o Trouble-shooting and support of current NAOC and 89th Wing operations (Sep 97; \$147K).</li> <li>o Development of overall and individual systems and subsystem engineering, transition plans and test plans for moving the NMCC to another location in the Pentagon (May 97; \$551K).</li> <li>o Engineering evaluation of new emergency message and TW/AA systems for the NMCC and NMCC Site R (Sep 97; \$171K).</li> <li>o Integration engineering and transitioning secure NMCC systems to the DMS (Feb 97; \$97K).</li> <li>o Revise and update the SLCA (Sep 97; \$87K).</li> </ul>										
<p><b>(U) FY 1998 Plans:</b></p> <ul style="list-style-type: none"> <li>o Revise and update the SLCA (1st Qtr - 4th Qtr; \$60K).</li> <li>o Technical analysis for implementation of improvement to NAOC and SAM aircraft (1st Qtr - 4th Qtr; \$120K).</li> <li>o Engineering support for qualitative operational test and evaluation of major NAOC improvements (1st-4th Qtr; \$100K).</li> <li>o Trouble-shooting and support of current NAOC and 89th Wing operations (1st Qtr - 4th Qtr; \$149K).</li> <li>o Automated Configuration Management for JS and NMCC (1st Qtr - 4th Qtr; \$178K).</li> <li>o NMCC Site R and STRATCOM Planning (1st Qtr - 4th Qtr; \$204K).</li> <li>o NMCS DDO Upgrade (1st Qtr- 4th Qtr; \$15K).</li> <li>o NMCS Engineering Support for integration of DII elements (1st Qtr - 4th Qtr; \$164K).</li> <li>o NMCC Relocation Connectivity to JCS and High Altitude Electromagnetic Pulse (HEMP) issues (1st Qtr - 4th Qtr; \$55K).</li> <li>o NMCC Engineering of COM and ADP Systems (1st Qtr - 4th Qtr; \$199K) \$1.244M Total</li> </ul>										

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RDTE & BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997																																																			
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/07				R-1 ITEM NOMENCLATURE National Military Command System (NMCS)-Wide Support/0302016K																																																									
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost																																																		
NMCS Command Center Engineering/S32		1.221	1.224	1.244	1.238	1.260	1.277	1.303	1.363	Contng	Contng																																																		
(U) FY 1999 Plans:																																																													
<ul style="list-style-type: none"> <li>o Revise and update the SLCA (1st Qtr - 4th Qtr; \$60K).</li> <li>o Technical analysis for implementation of improvements to NAOC and SAM aircraft (1st Qtr - 4th Qtr; \$120K).</li> <li>o Engineering support for qualitative operational test and evaluation of major NAOC improvements (1st Qtr - 4th Qtr; \$100K).</li> <li>o Trouble-shooting and support of current NAOC and 89th Wing operations (1st Qtr - 4th Qtr; \$149K).</li> <li>o Automated Configuration Management for JS and NMCC (1st Qtr - 4th Qtr; \$177K).</li> <li>o NMCC Site R and STRATCOM Planning (1st Qtr - 4th Qtr; \$203K).</li> <li>o NMCS DDO Upgrade (1st Qtr - 4th Qtr; \$15K).</li> <li>o NMCS Engineering Support for integration of DII elements (1st Qtr - 4th Qtr; \$160K).</li> <li>o NMCC Relocation Connectivity to JCS and HEMP issues (1st Qtr - 4th Qtr; \$55K).</li> <li>o NMCC Engineering of COM and ADP Systems (1st Qtr - 4th Qtr; \$199K) \$1.238M Total</li> </ul>																																																													
B. Program Change Summary:																																																													
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 30%;"></th> <th style="text-align: center; width: 15%;"><u>FY96</u></th> <th style="text-align: center; width: 15%;"><u>FY97</u></th> <th style="text-align: center; width: 15%;"><u>FY98</u></th> <th style="text-align: center; width: 15%;"><u>FY99</u></th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget (FY97)</td> <td style="text-align: center;">1.221</td> <td style="text-align: center;">1.268</td> <td style="text-align: center;">1.315</td> <td style="text-align: center;">1.337</td> </tr> <tr> <td>Appropriated Value</td> <td style="text-align: center;">1.314</td> <td style="text-align: center;">1.268</td> <td></td> <td></td> </tr> <tr> <td>Adjustments to Appropriated Value</td> <td style="text-align: center;">-.093</td> <td style="text-align: center;">-.044</td> <td></td> <td></td> </tr> <tr> <td>Adjustments to Budget Year Since FY97 President's Budget</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Current Budget Submit/President's Budget (FY98)</td> <td style="text-align: center;">1.221</td> <td style="text-align: center;">1.224</td> <td style="text-align: center;">1.244</td> <td style="text-align: center;">1.238</td> </tr> <tr> <td>Change Summary Explanation:</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>FY96 and FY97 changes due to Congressional adjustment to Defense-Wide Investment Appropriation.</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>FY98 and FY99 adjustments due to revised fiscal guidance.</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Page 9 of 18</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	Previous President's Budget (FY97)	1.221	1.268	1.315	1.337	Appropriated Value	1.314	1.268			Adjustments to Appropriated Value	-.093	-.044			Adjustments to Budget Year Since FY97 President's Budget					Current Budget Submit/President's Budget (FY98)	1.221	1.224	1.244	1.238	Change Summary Explanation:					FY96 and FY97 changes due to Congressional adjustment to Defense-Wide Investment Appropriation.					FY98 and FY99 adjustments due to revised fiscal guidance.					Page 9 of 18															
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DATE: February 1997

**RDTE BUDGET ITEM JUSTIFICATION (R-2 Exhibit)**

## APPROPRIATION/BUDGET ACTIVITY

NMCS Command Center Engineering/S32							Cost to Complete	Total Cost	Contng	
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Contng
1.221	1.224	1.244	1.238	1.260	1.277	1.303	1.363			

### C. Other Program Funding Summary:

## Scheduled Profile:

For more information on the use of the *liver* and *liver*–*kidney* model, see the *liver* and *liver*–*kidney* vignettes.

2nd QTR: Develop Option 1 of contract for NMCS Engineering Test & Evaluation

Provide system engineering for implementation of new NAOC red/black voice switching system. Develop Option Year 1 of contract for Command Center System Engineering.

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2nd qtr: Develop Option Year 2 of contract for NMCS Engineering Fe

4th Qtr: Develop Option Year 2 of contract for Command Center System

Complete Engineering for systems transition of new NMCC.

- SLCU update to provide CINCS and Service Chiefs guidance on how to improve their positions of the Senior Leadership Travel Communications System.

FY1998 1st Qtr: Provide interactive distributed communications management system for NMCS tasks.

2nd Otr: Integrate new DII elements into JS procedures:

3rd At: Update on-line database reference systems with new subscriber services

14th Oct.: Found *unlabelled* friend. Information compatibility  
with 2nd. Update on line database reference system

4th Qtr: Expand Unclassified in

## Annual update of SLCA.

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE: February 1997				
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/07				R-1 ITEM NOMENCLATURE National Military Command System (NMCS)-Wide Support/0302016K							
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
NMCS Command Center Engineering/S32	1.221	1.224	1.244	1.238	1.260	1.277	1.303	1.363	Contg	Contg	
FY1999 1st Qtr: NMCC relocation issues, consolidation of communications control from Site R. 2nd Qtr: NMCS ADP terminal improvement. 3rd Qtr: NMCC display and video switching improvement. 4th Qtr: NMCC DII integration with HEMP Room Equipment Suite. Annual Update of SLCA.											

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RD <sup>T</sup> E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)		DATE: February 1997																								
<b>APPROPRIATION/BUDGET ACTIVITY</b> RD <sup>T</sup> E, Defense Wide/07		<b>R-1 ITEM NOMENCLATURE</b> National Military Command System (NMCS) -Wide Support/0302016K NMCS Command Center Engineering/S32																								
<table border="1"> <tr> <td><b>A. Project Cost Breakdown: (\$000)</b></td> <td colspan="3"></td> </tr> <tr> <td>Projected Cost Categories</td> <td><u>FY96</u></td> <td><u>FY97</u></td> <td><u>FY98</u></td> </tr> <tr> <td>a. System Engineering</td> <td>1,221</td> <td>1,224</td> <td>1,244</td> </tr> <tr> <td></td> <td></td> <td></td> <td><u>FY99</u></td> </tr> <tr> <td></td> <td></td> <td></td> <td>1,238</td> </tr> </table>			<b>A. Project Cost Breakdown: (\$000)</b>				Projected Cost Categories	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	a. System Engineering	1,221	1,224	1,244				<u>FY99</u>				1,238				
<b>A. Project Cost Breakdown: (\$000)</b>																										
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			<u>FY99</u>																							
			1,238																							
<p>B. <u>Budget Acquisition History and Planning Information:</u></p> <p>Support and Management Organizations</p> <table border="1"> <thead> <tr> <th>Contractor or Government Performing Activity</th> <th>Contract Method/Type or Funding Vehicle</th> <th>Award or Obligation Date</th> <th>Performing Activity</th> <th>Project Office</th> <th>Prior to EAC</th> <th>Budget FY96</th> <th>Budget FY97</th> <th>Budget FY98</th> <th>Budget FY99</th> <th>Budget to Complete</th> <th>Total Program</th> </tr> </thead> <tbody> <tr> <td>Multiple Performing Activities</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1,221</td> <td>1,224</td> <td>1,244</td> <td>1,238</td> <td>Contg</td> <td>Contg</td> </tr> </tbody> </table> <p>Government Furnished Property: N/A</p> <p>TOTAL PROJECT</p>			Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity	Project Office	Prior to EAC	Budget FY96	Budget FY97	Budget FY98	Budget FY99	Budget to Complete	Total Program	Multiple Performing Activities						1,221	1,224	1,244	1,238	Contg	Contg
Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity	Project Office	Prior to EAC	Budget FY96	Budget FY97	Budget FY98	Budget FY99	Budget to Complete	Total Program															
Multiple Performing Activities						1,221	1,224	1,244	1,238	Contg	Contg															

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)								DATE: February 1997			
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/07				R-1. ITEM NOMENCLATURE National Military Command System (NMCS)-Wide Support/0302016K							
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
Support to Defense Support Activity/Z60		.374	.387	.414	.430	.443	.457	.467	.477	contg	Contg

A. Mission Description and Budget Item Justification:

This project provides direct support to the Defense Support Activity (DSA) as prescribed in DOD Directive 5100.81. This project is unique in terms of the policy decisions supported and that the customers supported are actual DOD policy decision-makers. Z60 supports basic research and the acquisition and enhancement of software that aids in the illumination of counter-proliferation issues. Research is also provided in a number of areas of special interest to the OSD's theater tactical ballistic and cruise missile defense community and Precision Guided Munition (PGM) communities, as well as the defense planning community, and the acquisition and employment policy making communities. It also supports systems engineering, development of state-of-the-art technologies and the translation of these technologies into leading edge analytical models. Acquisition of support is provided by competitively awarded contracts.

(U) FY 1996 Accomplishments:

- o Developed analytical tools to support assessments of joint warfighting operational plans' compliance with the Secretary's guidance and to rapidly illuminate policy issues. This development focused on illustrating PGM effects and optimal deployment of theater missile defenses. (\$96K) Sep 96
- o Acquired and enhanced leading edge analytical tools to rapidly illuminate policy issues in the following areas:
  - 1) the probability of structural damage to deep underground targets; and
  - 2) the effects of chemical and biological munitions on military operations. (\$90K) Sep 96
- o Analyzed the potential contributions of Navy Upper Tier defensive systems and sensor requirements. (\$96K) Sep 96
- o Developed analytical tools for the study of both the cruise missile defensive and ballistic missile defensive systems, technologies, logistics, and architectures. (\$55K) Sep 96
- o Provided research support to the USD(A&T) as the cruise missile and ballistic missile threats evolve. (\$37K) Sep 96

\$.374M Total

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							R-1 ITEM NOMENCLATURE				DATE: February 1997		
APPROPRIATION/BUDGET ACTIVITY				National Military Command System (NMCS)-Wide Support/0302016K									
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost		
Support to Defense Support Activity/Z60		.374	.387	.414	.430	.43	.457	.467	.477	Contng	Contng		
(U) <u>FY 1997</u> Plans:													
o Continue to develop analytical tools used to support assessments of joint warfighting operational plans' compliance with the Secretary's guidance and to rapidly illuminate policy issues. This development will focus on illustrating PGM effects and optimal deployment of theater missile defenses. (\$100K) Sep 97													
o Continue to acquire and enhance leading edge analytical tools to rapidly illuminate policy issues in the following areas:													
1) the probability of structural damage to deep underground targets; and													
2) the effects of chemical and biological munitions on military operations. (\$100K) Sep 97													
o Examine the effectiveness of current and planned theater, regional, and national defensive systems against emerging threats. (\$100K) Sep 97													
o Develop analytical tools for the study of both the cruise missile defense and ballistic missile defensive systems, technologies, logistics, and architectures. (\$50K) Sep 97													
o Provide research support to the USD(A&T) as the cruise missile and ballistic missile threats evolve. (\$37K) Sep 97													
\$ .387M Total													
(U) <u>FY 1998</u> Plans:													
o Continue to develop analytical tools used to support assessments of joint warfighting operational plans' compliance with the Secretary's guidance and to rapidly illuminate policy issues. This development will focus on illustrating PGM effects and optimal deployment of theater missile defenses. (\$103K) Sep 98													
o Continue to acquire and enhance leading edge analytical tools to rapidly illuminate policy issues in the following areas:													
1) the probability of structural damage to deep underground targets; and													
2) the effects of chemical and biological munitions on military operations. (\$103K) Sep 98													

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RDTE&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)								DATE: February 1997		
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE						
RDTE&E, Defense Wide/07				National Military Command System (NMCS)-Wide Support/0302016K						
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
Support to Defense Support Activity/Z60	.374	.387	.414	.430	.443	.457	.467	.477	Contng	Contng

(U) FY 1998 Plans (cont'd):

- o Examine the ongoing Israeli/US ground based Theater High Energy Laser and the U.S. Airborne Laser programs for system efficacy and program performance. Provide alternatives and recommendations to USD(A&T). (\$108K) Sep 98
- o Evaluate National Missile Defense (NMD), Theater High Altitude Air Defense (THAAD), Navy Wide Area and Navy Theater Area Defense systems for performance and program effectiveness. Provide programmatic alternatives and recommendations to USD(A&T). (\$50K) Jun 98
- o Evaluate the DOD Cruise Missile Defense (CMD) programs and management structure for effectiveness and provide alternatives and recommendations to USD(A&T). (\$50K) Jun 98

\$ .414M Total

(U) FY 1999 Plans:

- o Continue to develop analytical tools used to support assessments of joint warfighting operational plans' compliance with the Secretary's guidance and to rapidly illuminate policy issues. This development will focus on illustrating PGM effects and optimal deployment of theater missile defenses. (\$108K) Sep 99
- o Continue to acquire and enhance leading edge analytical tools to rapidly illuminate policy issues in the following areas:
  - 1) the probability of structural damage to deep underground targets; and
  - 2) the effects of chemical and biological munitions on military operations. (\$107K) Sep 99
- o Examine the effectiveness of current and planned theater, regional, and national defensive programs and systems for effectiveness against emerging threats and program performance. Provide alternatives and recommendations to the USD(A&T). (\$135K) Sep 99
- o Develop analytical tools for the study of both cruise missile and ballistic missile defensive systems, technologies, logistics, and architectures. (\$50K) Sep 99

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DATE: February 1997

ROUTE BOUNDARY AND ITEM OUTSTANDING (B-2 Exhibit)

## APPROPRIATION / BUDGET ACTIVITY

BTDFC: Defense wide 07  
BTDFC: Defense wide 07

### (11) FY1999 Plans (cont'd):

Provide ongoing special project research support to the USD(A&T) as the cruise missile and ballistic missile threats evolve. (\$30K) Sep 99  
\$430M Total

B. *Environ. Chem. Lett.* 2007, 5, 293–297

previous President's Budget (FY97)

ECONOMIC GROWTH AND INFLATION 223

### Interpolated Value

## Adjustments to Appropriated Value

adjustments to Budget Year Since FY97 President

- Current Budget Submit / President's

בְּרִיתְמָה וְעִמָּנָה וְעִמָּנָה וְעִמָּנָה וְעִמָּנָה

## Change Summary Explanation:

FY96 and FY97 changes are due to Congressional adjustment to Defense-Wide Investment Appropriation

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**C. Other Program Fu**

Not applicable.

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/07					R-1 ITEM NOMENCLATURE National Military Command System (NMCS)-Wide Support/0302016K						
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
Support to Defense Support Activity/Z60		.374	.387	.414	.430	.443	.457	.467	.477	Contg	Contg
D. Schedule Profile:											
Fiscal Year actual and planned events by quarter											
		FY96			FY97				FY98		FY99
		1	2	3	4	1	2	3	4	1	2
Annual Renewal of contract					X			X			

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## RDT&amp;E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE: February 1997

APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE					
RDT&E, Defense Wide/07		National Military Command System (NMCS)-Wide Support/0302016K Support to Defense Support Activity/z60					

A. Project Cost Breakdown: (\$000)							
		FY96	FY97	FY98	FY99		
Project Cost Categories							
a. Basic Research and Software Analysis		374	387	414	430		
TOTAL		374	387	414	430		
B. Budget Acquisition History and Planning Information: Support and Management Organizations							
Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Prior to Budget FY96	Budget FY97	Budget FY98
Multiple Performing Activities					374	387	414
Government Furnished Property: N/A						430	Contng
TOTAL PROJECT					374	387	414
							430

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APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/07							DATE: February 1997				
							R-1 ITEM NOMENCLATURE Joint/Defense Information Systems Engineering and Integration 0302019K				
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
Total Program Element (PE) Cost		3.622	4.468	4.721	4.971	5.404	5.858	5.984	6.123	Contg	Contg
Defense-Wide C3 Architecture & Planning/T62		1.200	1.373	1.464	1.542	1.707	1.873	1.912	1.957	Contg	Contg
Theater C3 Technical Integration/T63		.447	0*	0	0	0	0	0	0	Contg	Contg
Technology Advancement/A19		.349	.361	.366	.360	.375	.390	.399	.407	Contg	Contg
Special Projects/T64		1.100	1.114	1.200	1.246	1.386	1.531	1.564	1.601	Contg	Contg
CINCUSACOM Support/T65		.526	0*	0	0	0	0	0	0	Contg	Contg
CINC/JTF C4 Integration/T66		0*	1.620	1.691	1.823	1.936	2.064	2.109	2.158	Contg	Contg

**A. Mission Description & Budget Item Justification:**

This program provides overall system analysis, architectural development, system engineering, integration, and developmental engineering responsibilities for joint and national level command, control, and communications (C3) systems to ensure the affected systems continue to be responsive in current, dynamically changing environments. These activities involve joint/national level systems which necessitate a high degree of multi-service/agency planning and development. Included are technical support and engineering integration to facilitate compliance with standards and technical architectures and to improve the command centers of the Unified and Specified (U&S) Commands. Technical support in the above mentioned activities is provided to the Office of the Secretary of Defense (OSD), the Joint Staff (JS), U&S Commands (CINCs), the Military Departments and Defense Agencies. The program element develops planning guidance backed by analysis and data to support OSD, the JS, and the CINCs in prioritizing their command and control (C2) requirements and acquisitions. This program element is under Budget Activity 07 because it involves efforts supporting operational systems development.

\*Beginning FY 1997, Projects T63 and T65 are combined into a new project, "CINC/JTF C4 Integration", T66.

RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE: February 1997		
APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE				Joint/Defense Information Systems Engineering and Integration		
RDT&E, Defense Wide/07			0302019K						
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete
Defense-Wide C3 Architecture & Planning/T62	1.200	1.373	1.464	1.542	1.707	1.873	1.912	1.957	Contg

A. Mission Description & Budget Item Justification:

This project encompasses two efforts: (1) The first effort provides the interoperability and integration of resources essential to the achievement of a Global C4I Infrastructure program which includes all DOD information systems, sensors, data storage services, communications networks, and computer storage devices to provide collection, processing, storage, display and information transfer; (b) DII Technology Insertion, which provides assessment of the utility of new technology through high level performance simulation of the DII; (c) The Defense Information Systems Network (DISN) which addresses the fixed common-user systems, treating the long haul communications, base-level, and rear-area tactical communications as an end-to-end system with particular focus on user requirements, technology and standards, features and services, security, and network management; (d) the DISN security which includes current and future DISN security initiatives for communications. (2) The second effort provides planning for interoperability and integration of C4I for the Warrior (C4IFTW). This is accomplished through the development of enterprise, mission, functional and technical architecture products. These products depict how all DOD systems, to include information, sensors, data storage services, and communications networks provide collection, processing, storage, display and information transfer. It incorporates the DII and National Information Infrastructure (NII). This project gives DOD overall improved operational performance and reduced costs through common architecture standards and interfaces, and a sharing of assets and capabilities.

(U) FY 1996 Accomplishments:

- o Provide major update of DISN architecture guidance based on FY95 accomplishments together with technology and standards evolution (Sep 96; \$348K).
- o Initiate DISN transition plan in support of Global Grid (sep 96; \$341K).
- o Develop tools for legacy DISN networks on object oriented, open COTS system and tools for design/analysis of Asynchronous Transmission Mode (ATM) -based networks on object oriented, open COTS system (Sep 96; \$511K).

\$1.200M Total

## RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

## APPROPRIATION/BUDGET ACTIVITY

RDT&E, Defense Wide/07  
R-1 ITEM NOMENCLATURE  
Joint/Defense Information Systems Engineering and Integration  
0302019K.

COST (in millions)	FY96	FY97	FY98	FY99	R-1 ITEM NOMENCLATURE		
					FY00	FY01	FY02
Defense-Wide C3 Architecture & Planning/T62	1.200	1.373	1.464	1.542	1.707	1.873	1.912
							1.957

## (U) FY 1997 Plans:

- o Perform Horizontal Integration Analysis and develop system engineering guidance for Horizontal Integration between the components of DISN, Defense Messaging System (DMS), DII COE, Global Command and Control System (GCCS), Global Combat Support System (GCSS), DII Command and Control (DIIC2) and INFOSEC (Sep 97; \$838K).
- o Develop prototype access line sizing for ATM-based networks and prototype backbone link sizing for ATM-based networks (Sep 97; \$535K).

\$1.373M Total

(U) FY 1998 Plans:

- o Continue to perform Horizontal Integration Analysis and develop system engineering guidance for Horizontal Integration between the components of DISN, DMS, DII COE, GCSS, DIIC2 and INFOSEC (Sep 98; \$893K).
- o Develop DISA/ARPA Joint Program Office recommended ATM user premises infrastructure design/analysis trade-off capability and develop ATM traffic source characterizations for specific applications (Sep 98; \$571K).

\$1.464M Total

(U) FY 1999 Plans:

- o Continue to perform Horizontal Integration Analysis and develop system engineering guidance for Horizontal Integration between the components of DISN, DMS, DII COE, GCSS, DIIC2 and INFOSEC (Sep 99; \$941K).
- o Validate traffic source models for specific ATM applications and develop capability to import operational topology and traffic information from ATM-based networks (Sep 99; \$601K).

\$1.542M Total

Acquisition Strategy: The MITRE Corporation, McLean, VA; Booz-Allen &amp; Hamilton, Inc., Bethesda, MD; Logicon, Reston, VA.

## RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

**APPROPRIATION/BUDGET ACTIVITY**

RDT&E, Defense Wide/07  
RDT&E, Defense Wide/07  
0302019K

COST (in millions)	FY96	FY97	FY98	FY99	R-1 ITEM NOMENCLATURE		
					FY00	FY01	FY02
Defense-Wide C3 Architecture & Planning/T62	1.200	1.373	1.464	1.542	1.707	1.873	1.912

**B. Program Change Summary:**

	FY96	FY97	FY98	FY99
Previous President's Budget (FY97)				
Appropriated Value	1.323	1.399	1.470	1.551
Adjustments to Appropriated Value	1.869	1.399		
Adjustments to Budget Year Since FY97 President's Budget	-.669	-.026		
Current Budget Submit/President's Budget (FY98)				
Change Summary Explanation:				
FY96 reduction due to below threshold reprogramming.				
FY97 decrease due to congressional adjustment to Defense-wide Investment Appropriation.				
FY98-99 adjustment due to revised fiscal guidance.				

**C. Other Program Funding Summary:**

N/A

**D. Schedule Profile:**

<u>FY 1996</u>	3rd Qtr:	Develop design tools for legacy DISN networks.
<u>FY 1997</u>	3rd Qtr:	Develop design tools for ATM-based networks.
<u>FY 1998</u>	4th Qtr:	Develop ATM traffic source characterizations.
<u>FY 1999</u>	4th Qtr:	Develop capability to import operational topology and traffic from ATM-based networks.

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)		DATE: February 1997	
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE	
RDT&E, Defense Wide/07		Joint/Defense Information Systems Engineering and Integration 0302019K/Defense-Wide C3 Architecture & Planning/T62	
A. Project Cost Breakdown: (\$000)		<u>FY96</u>	<u>FY97</u>
a. Systems Engineering		1,200	1,373
TOTAL		1,200	1,373
		<u>FY98</u>	<u>FY99</u>
		1,464	1,464
B. Budget Acquisition History and Planning Information:			
Support and Management Organizations			
Contractor or Government	Contract	Award or Obligation	Project
Performing	Method/Type	Activity	Office
Activity	or Funding	Date	Prior to
	Vehicle		Budget
			<u>FY96</u>
			<u>FY97</u>
Multiple	CPAF		Budget
Performing	CPFF		<u>FY98</u>
Activities	MIPR		<u>FY99</u>
Government Furnished Property: N/A			
TOTAL PROJECT		1,200	1,373
		1,464	1,464

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)								DATE: February 1997		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/07				R-1 ITEM NOMENCLATURE Joint/Defense Information Systems Engineering and Integration 0302019K						
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
Theater C3 Technical Integration/T63	.447	0*	0	0	0	0	0	0	0	Contng

A. Mission Description & Budget Item Justification:

This project provides technical engineering support to ensure technical integration of tactical switched systems and associated network management into the Strategic Network in a seamless architecture that supports the C4IETW concept. The project provides support directly to the warfighting and supporting CINCs to overcome deficiencies in the interface and management between tactical and strategic as well as tactical-to-tactical switched systems and to provide C3 capabilities that contribute to mission accomplishment. This project supports DISA's designated responsibilities as the technical integrator for tactical to DISN switched systems and as the integrator for all DOD communications network management systems. In addition, it provides a method to inject Corporate Information Management (CIM), and DII concepts, evolving architectures and standards into the theater commands, thus contributing to the achievement of global C3I infrastructure. USCENTCOM, USCOM, USPACOM, USEUCOM, and USOUTHCOM depend on this project to correct existing C3 deficiencies which have significant operational impacts. This support is near-term, externally focused and user oriented; the recommendations are developed in coordination with the warfighting planners. This project provides the technical guidance to CINC and Service C4I system development to ensure that both CINC and service programs incorporate and are consistent with the DISN Goal Architecture and C4IETW guidance.

(U) FY 1996 Accomplishments:

- o Provide engineering for Joint Communications Planning and Management System (JCPMS) Planning and Management Support (Sep 96; \$223K).
- o Develop architecture documentation and provide support necessary for implementation of the Joint Task Force Tactical Communications Architecture, provide technical support for the Joint Task Force (JTF) interoperability work, and assist with solving JTF interoperability problems referred to DISA for resolution (Sep 96; \$224K).  
\$ .447M Total

\*Beginning FY 1997, Projects T63 and T65 are combined into a new project, "CINC/JTF C4 Integration", T66.

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## RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

DATE: February 1997

APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE					
RDT&E, Defense Wide/07		Joint/Defense Information Systems Engineering and Integration 0302019K					
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01
Theater C3 Technical Integration/T63	.447	0*	0	0	0	0	0

Acquisition Strategy: Booz-Allen & Hamilton, Inc., Bethesda, MD; The MITRE Corporation, McLean, VA; Logicon Eagle Technology, Reston, VA and Winter Park, FL.

## B. Program Change Summary:

Previous President's Budget (FY97)  
 Appropriated Value  
 Adjustments to Appropriated Value  
 Adjustments to Budget Year Since FY97 President's Budget  
 Current Budget Submit/President's Budget (FY98)  
 Change Summary Explanation:  
 FY96 reduction due to Congressional adjustments of Defense-Wide Investment appropriation and below threshold reprogramming.  
 \*In FY97, funding for this project was combined with Project T65 in a new project, T66.

## C. Other Program Funding Summary:

Operation and Maintenance:

Related RDT&E: Other projects in PE #0302019K.

<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>
.447	0	0	0

Total Cost
Contg

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997	
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE									
Joint/Defense Information Systems Engineering and Integration 0302019K											
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
Theater C3 Technical Integration/T63	.447	0*	0	0	0	0	0	0	0	0	Contg

D. Schedule Profile:

FY 1996 1st Qtr: Limited Testing and Evaluation of Joint Integrated Tactical Switch (JITS) prototypes.  
 2nd Qtr: JITS Milestone III Review.  
 Initial Fielding of Joint Communications Network Management Tool.

3rd Qtr: Issue RFP for JITS.  
 Fielding/Retrofit of Circuit Switch Routing Task Execution Plan.

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APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/07		RDTE PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)		DATE: February 1997	
		R-1 ITEM NOMENCLATURE Joint/Defense Information Systems Engineering and Integration 0302019K/Theater C3 Technical Integration/T63			
A. Project Cost Breakdown: (\$000)		<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>
Project Cost Categories					
a. Systems Engineering		447	0*	0	0
TOTAL		447	0*	0	0
B. Budget Acquisition History and Planning Information:					
Support and Management Organizations					
Contractor or Government Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity	Project Office <u>EAC</u>	Prior to <u>FY96</u> Budget <u>FY97</u> Budget <u>FY98</u> Budget <u>FY99</u> Budget to <u>Complete</u> Total Program
Multiple Performing Activities	CPAF CPFF MIPR			447	0 0 0 * *
Government Furnished Property:	N/A				
TOTAL PROJECT				447	0 0 0

\*Beginning FY 1997, Projects T63 and T65 are combined into a new project, "CINC/JTF C4 Integration", T66.

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE: February 1997		
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE					
RDT&E, Defense Wide/07				Joint/Defense Information Systems Engineering and Integration					
0302019K				FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
Technology Advancement/A19				.361	.366	.360	.375	.390	.399
Technology Advancement/A19								.407	Contg
A. Mission Description & Budget Item Justification:									Contg
<p>The rapid evolution of the global military environment is driving a major evolution of the DOD force structure and military operations, requiring greater flexibility to meet the global warfighting requirements to rapidly project forces anywhere in the world. This project is to build a DOD-wide High Level Architecture (HLA) C4ISR Model Federation to support the acquisition, testing, and assessing of operational activities in support of OSD. The model supports these taskings by providing C4ISR quantitative analysis as measured against mission success. The quantitative analysis provided accentuates the decision making process in new acquisitions, assessments of doctrine and design of operational activities.</p>									
<p>(U) <u>FY 1996 Accomplishments:</u></p> <ul style="list-style-type: none"> <li>o Development of an initial prototype C4ISR model. (3rd Qtr - 4th Qtr) (\$.349M Total)</li> </ul>									
<p>(U) <u>FY 1997 Plans:</u></p> <ul style="list-style-type: none"> <li>o Initial integration with theater level force deployment models and analytical support for Vision 2000 objectives. (1st Qtr - 3rd Qtr) (\$.361M Total)</li> </ul>									
<p>(U) <u>FY 1998 Plans:</u></p> <ul style="list-style-type: none"> <li>o Full integration with theater level force deployment models. (1st Qtr - 3rd Qtr) (\$.366M Total)</li> </ul>									
<p>(U) <u>FY 1999 Plans:</u></p> <ul style="list-style-type: none"> <li>o Full integration for DISA CINC assessments. (1st Qtr - 3rd Qtr) (\$.360M Total)</li> </ul>									

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997	
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE									
RDT&E, Defense Wide/07		Joint/Defense Information Systems Engineering and Integration 0302019K									
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
Technology Advancement/A19	.349	.361	.366	.360	.375	.390	.399	.407	.407	Contg	Contg
B. Program Change Summary:											
		FY96	FY97	FY98	FY99						
Previous President's Budget (FY97)		.349	.361	.367	.362						
Appropriated Value		.479	.361								
Adjustments to Appropriated Value		-.130	0								
Adjustments to Budget Year Since FY97 President's Budget											
Current Budget Submit/President's Budget (FY 98)		.349	.361	.366	.360						
Change Summary Explanation:											
FY96 reduction due to Congressional adjustment of Defense-wide Investment appropriation and below threshold reprogramming.											
FY98 and FY99 changes due to revised fiscal guidance.											
C. Other Program Funding Summary:		N/A									

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997	
<b>APPROPRIATION/BUDGET ACTIVITY</b>										<b>R-1 ITEM NOMENCLATURE</b>	
RDT&E, Defense Wide/07										Joint/Defense Information Systems Engineering and Integration	
		0302019K									
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost	Contg
Technology Advancement/A19	.349	.361	.366	.360	.375	.390	.399	.407	.407	.407	Contg
D. Schedule Profile:											
Fiscal Year actual and planned events by quarter.											
<u>FY 1996</u>	3rd Qtr:	Execute option year of technical support contract									
<u>FY 1997</u>	1st Qtr:	Execute option year of technical support contract									
<u>FY 1998</u>	1st Qtr:	Execute option year of technical support contract									
<u>FY 1999</u>	1st Qtr:	Execute option year of technical support contract									

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)		DATE: February 1997	
APPROPRIATION/BUDGET ACTIVITY	ITEM NOMENCLATURE	R-1 ITEM NOMENCLATURE	
RDT&E, Defense Wide/07		Joint/Defense Information Systems Engineering and Integration 0302019K/Technology Advancement/A19	
A. Project Cost Breakdown: (\$000)		<u>FY96</u>	<u>FY97</u>
Project Cost Categories			
a. System analysis, design and programming	349	361	366
TOTAL	349	361	366
B. Budget Acquisition History and Planning Information	N/A		

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997	
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					Joint/Defense Information Systems Engineering and Integration	
RDT&E, Defense Wide/07					0302019K						
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost	Contg
Special Projects/T64	1.100	1.114	1.200	1.246	1.386	1.531	1.564	1.601	Contg		

A. Mission Description & Budget Item Justification:  
All aspects of this project are classified and require special access. Therefore, information on this project is not contained in this document but can be obtained upon request.

B. Program Change Summary:

	FY96	FY97	FY98	FY99
Previous President's Budget (FY97)	1.100	1.155	1.205	1.253
Appropriated Value	1.412	1.155		
Adjustments to Appropriated Value	-.312	-.041		
Adjustments to Budget Year Since FY97 President's Budget				
Current Budget Submit/President's Budget (FY98)	1.100	1.114	1.200	1.246
Change Summary Explanation:				
FY96 reduction due to Congressional adjustment of Defense-wide Investment Appropriation and below threshold reprogramming.				
FY97 decrease due to Congressional adjustment of Defense-wide Investment Appropriation.				
FY98-99 adjustment due to revised fiscal guidance.				

C. Other Program Funding Summary:  
Related RDT&E: PE 0303131K, Minimum Essential Emergency Communications Network (MEECN).

D. Schedule Profile:  
Information will be made available upon request.

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RDTE PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)		DATE: February 1997		
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE			
RDTE, Defense Wide/07		Joint/Defense Information Systems Engineering and Integration 0302019K/Special Projects/T64		
A. Project Cost Breakdown: (\$000)		<u>FY96</u>	<u>FY97</u>	
Project Cost Categories				
a. Systems Engineering		1,100	1,114	
TOTAL		1,100	1,114	
B. Budget Acquisition History and Planning Information		<u>FY98</u>	<u>FY99</u>	
Support and Management Organizations				
Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity	
MITRE	SS/CPFF	EAC	EAC	
Government Furnished Property: N/A				
TOTAL PROJECT		1,100	1,114	
		1,200	1,246	

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE: February 1997		
APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE						
RDT&E, Defense Wide/07			Joint/Defense Information Systems Engineering and Integration 0302019K						
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete
CINCUSACOM Support/T65	.526	0*	0	0	0	0	0	0	Contng

A. Mission Description & Budget Item Justification:

This project develops the near and mid-term Command, Control, Communications and Computer (C4) plans for CINCUSACOM, identifies shortcomings in C4 systems and procedures and, when appropriate, prototype solutions to those shortcomings. The CJCS Unified Command Plan significantly increased ACOM's missions, giving the command the responsibility for joint training, joint force packaging, UN peacekeeping support and the land defense of CONUS and Canada. Because of this, USACOM's C4 planning encompasses missions much broader than other unified commands and will serve as a model for them. Therefore, this project's outputs not only contain the only C4 planning done for specific operational missions but they will also contain key portions of the C4 planning for support to all CINCs' operational missions. Implementation of this project will, therefore, provide global benefits for all the nation's security objectives.

(U) FY 1996 Accomplishments:

- o Supported USACOM's production of their FY96 C4 Strategic Master Plan (C4SMP) Assessment Update (Sep 96; \$240K).
- o Prototyped solutions to USACOM's C4 deficiencies with global impact and collect data on ACOM's operational use to expedite standardized solution development (Aug 96; \$286K).

\$ .526M Total

Acquisition Strategy: Logicon Eagle Technology, Inc., Winter Park, FL.

\*Beginning FY 1997, Projects T63 and T65 are combined into a new project, "CINC/JTF C4 Integration", T66.

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RDTE&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997							
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE															
RDTE&E, Defense Wide/07										Joint/Defense Information Systems Engineering and Integration							
0302019K		0302019K															
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost						
CINCUSACOM Support/T65	.526	0*	0	0	0	0	0	0	0	0	Contng						
B. Program Change Summary:																	
Previous President's Budget (FY97)		<u>FY96</u>		<u>FY97</u>		<u>FY98</u>		<u>FY99</u>		<u>FY99</u>							
Appropriated Value		.526		0*		0		0		0							
Adjustments to Appropriated Value		.451		+ .075													
Adjustments to Budget Year Since FY97 President's Budget																	
Current Budget Submit/President's Budget (FY98)		.526		0*		0		0		0							
Change Summary Explanation:																	
FY96 adjustment due to below threshold reprogramming.																	
C. Other Program Funding Summary:																	
Operations and Maintenance		<u>FY96</u>		.665													
D. Schedule Profile:																	
FY 1996																	
1st Qtr: Place tasks on contract																	
3rd Qtr: Delivery of FY96 C4 Assessment																	
4th Qtr: Delivery solution recommendation for ACOM evaluation																	

\*Beginning FY 1997, Projects T63 and T65 are combined into a new project, "CINC/JTF C4 Integration", T66.

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RDTE PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)		DATE: February 1997	
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE	
RDT&E, Defense Wide/07		Joint/Defense Information Systems Engineering and Integration 0302019K/CINCUSACOM/T65	
A. Project Cost Breakdown: (\$000)		FY96	FY97
Project Cost Categories			FY98
a. Systems Engineering		526	0*
TOTAL			0
B. Budget Acquisition History and Planning Information			FY99
Support and Management Organizations			
Contractor or Government	Contract Method/Type	Award or Obligation	Project
Performing Activity	or Funding Vehicle	Activity Date	Office
		EAC	EAC
LOGICON	C/CPAF		
Government Furnished Property: N/A			
TOTAL PROJECT			
		526	0*
			0

\*Beginning FY 1997, Projects T63 and T65 are combined into a new project, "CINC/JTF C4 Integration", T66.

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## RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

DATE: February 1997

APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE					
RDT&E, Defense Wide/07		Joint/Defense Information Systems Engineering and Integration 0302019K					
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01
CINC/JTF C4 Integration/T66	0	1.620*	1.691	1.823	1.936	2.064	2.109

A. Mission Description & Budget Item Justification:

The Chairman, Joint Chiefs of Staff Instruction (CJCSI) 6111.01, C4 Planning, Assessment, and Evaluation Process, establishes policy guidelines and assigns responsibilities for modernization planning, analytical assessment, and operational evaluation of C4 systems. It provides general guidance to the CINCs, sub-unified commands, Service components, and the Joint Staff for coordinating actions required to field new C4 systems, integrating systems architectures, modifying existing systems, and assessing short and long range C4 capabilities or deficiencies. It is the basis for CINC C4 inputs to the JSPS, PPBS, the CINCs Integrated Priority List (IPL), the Joint Monthly Readiness Report, and the Joint Warfighter Capabilities Assessment (JWCA). The process advocates documentation of short, middle, and long range C4 objectives, anticipating future requirements and serving as regional C4 road map. CJCSI 6111.01 specifically identifies DISA as the responsible agent for providing the following technical and automation support to the Joint Staff, J-6, and the CINCs:

- (1) Development and maintenance of automated C4 analysis tools.
- (2) Performing C4 studies or analysis in support of the CINCs or Joint Staff.
- (3) Providing a secure electronic repository for C4 planning, assessment, and evaluation documents.

(U) FY 1997 Plans:

- o Transition Road Map (TRM) Support to USSOUTHCOM: This work consists of updating and integrating the USSOUTHCOM TRM with C4ISR (Intelligence) issues; in addition to developing the CINC Annual C4 Assessment. This task also involves converting the TRM along with other supporting C4 assessment documentation to Hyper Text Markup Language (HTML) and loading it on to their home page on the SIPRNET. (Contng: \$250K)

\*This project is not a new start.

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## RDTE BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

## APPROPRIATION/BUDGET ACTIVITY

RDTE, Defense Wide/07

DATE: February 1997

R-1 ITEM NOMENCLATURE						
Joint/Defense Information Systems Engineering and Integration 0302019K						
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01
CINC/JTF C4 Integration/T66	0	1.620*	1.691	1.823	1.936	2.064
(U) FY 1997 Plans (cont'd):					2.109	2.158
					Contng	Contng

- o C4I Assessment and Planning Support to USACOM: This work consists of developing the FY97 USACOM C4 Planning, Assessment, and Evaluation Master Plan, along with the CINC Annual C4 Assessment. Both documents will be converted to HTML and loaded on to a home page on the SIPRNET with supporting C4 related documentation. (Contng; \$375K)
- o C4I Assessment and Planning Support to USSOCOM: This work consists of developing the CINC Annual C4 Assessment, converting it to HTML, and loading it on to a home page on the SIPRNET with supporting C4 related documentation. (Contng; \$375K)
- o C4 PA&E Automation Support: The objective of this task is to design, implement, and maintain CINC and Joint Staff home pages over the INTERNET World Wide Web. This task is inherent to supporting all CINCs and the Joint staff and associated costs are already included in the aforementioned tasks. (Contng; \$270K)
- o C4 Assessment Tool: This task involves development of an automated C4 assessment tool consisting of a database populated with criteria that serve as a strategic foundation for the development of warfighter objectives and capabilities for CINC USSOUTHCOM, USACOM, and USSOCOM. This criteria will be extracted from documents such as the Joint Monthly Readiness Report (JMRR), IPL, Joint Mission Essential Task List (JMETL), Joint Universal Lessons Learned System (JULLS), and JWCA issues. The CINCs will have the ability to weigh the relative value of each individual criteria, based on their mission and functions, producing a rank order listing of their C4 capabilities or deficiencies which they can incorporate into their JWCA submission to the Joint Staff. It would provide a uniform methodology across all the CINCs and tie the C4 PA&E process into the overall theater architecture through an automated means. The tool would run over the SIPRNET. (Contng; \$350K)

\$1.620M Total

\*This project is not a new start.

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## RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

DATE: February 1997

**APPROPRIATION/BUDGET ACTIVITY**RDT&E, Defense Wide/07  
**R-1 ITEM NOMENCLATURE**  
Joint/Defense Information Systems Engineering and Integration  
0302019K

COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
CINC/JTF C4 Integration/T66	0	1.620*	1.691	1.823	1.936	2.064	2.109	2.158	Contg	Contg

(U) FY 1998 Plans:

- o C4I Assessment and Planning Support to Joint Staff and Unified CINCs: This work consists of developing the FY98 C4 Planning, Assessment, and Evaluation Master Plan for all CINCs in addition to development of their CINC Annual C4 Assessment. These deliverables will be converted to Hyper Text Markup Language (HTML) and loaded on to CINC home pages on the SIPRNET with supporting C4 related documentation. Support to the Joint Staff will be closely similar. (Contg; \$1691K)

\$1.691M Total

(U) FY 1999 Plans:

- o C4I Assessment and Planning Support to Joint Staff and Unified CINCs: This work consists of developing the FY99 C4 Planning, Assessment, and Evaluation Master Plan for all CINCs in addition to development of their CINC Annual C4 Assessment. These deliverables will be converted to Hyper Text Markup Language (HTML) and loaded on to CINC home pages on the SIPRNET with supporting C4 related documentation. Support to the Joint Staff will be closely similar. (Contg; \$1823K)

\$1.823M Total

Acquisition Strategy: N/A

\*This project is not a new start.

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## RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

DATE: February 1997

**APPROPRIATION/BUDGET ACTIVITY**RDT&E, Defense Wide/07  
Joint/Defense Information Systems Engineering and Integration  
0302019K

COST (in millions)	FY96	FY97	FY98	FY99	R-1 ITEM NOMENCLATURE		
					FY00	FY01	FY02
CINC/JTF C4 Integration/T66	0	1.620*	1.691	1.823	1.936	2.064	2.109

**B. Program Change Summary:**

	FY96	FY97*	FY98	FY99
Previous President's Budget (FY97)	0	1.679	1.698	1.833
Appropriated Value		1.679		
Adjustments to Appropriated Value		-.059		
Adjustments to Budget Year Since FY97 President's Budget				
Current Budget Submit/President's Budget (FY98)	0			
Change Summary Explanation:				
FY97 decrease due to Congressional adjustment to Defense-Wide Investment Appropriation.				
FY98 and FY99 decrease due to revised fiscal guidance.				

**C. Other Program Funding Summary:**

N/A

\*This project is not a new start.

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DATE: February 1997

## RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

**APPROPRIATION/BUDGET ACTIVITY**

RDT&amp;E, Defense Wide/07

COST (in millions)

R-1 ITEM NOMENCLATURE  
Joint/Defense Information Systems Engineering and Integration  
0302019K

	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
CINC/JTF C4 Integration/T66	0	1.620*	1.691	1.823	1.936	2.064	2.109	2.158	Contg	Contg

D. Schedule Profile:

FY1997	1st Qtr:	1st Draft of SOUTHCOM TRM								
	2nd Qtr:	1st Draft of ACOM C4 PA&E Master Plan								
		1st Draft of SOCOM C4 PA&E Master Plan								
		C4PA&E Automation Support								
		Final Draft of SOUTHCOM TRM								
		Preliminary design of the C4 Assessment Tool								
	3rd Qtr:	C4 PA&E Automation support								
		Complete development of the C4 Assessment Tool								
	4th Qtr:	C4 PA&E Automation Support								
		Complete development of the C4 Assessment Tool								
		CINC C4 Annual Summary								
FY1998	1st Qtr:	1st Draft of each CINCS C4 PA&E Plan								
		C4 PA&E Automation Support								
		C4 Assessment Tool O&M								
	2nd Qtr:	Final Draft of each CINCS C4 PA&E Plan								
		C4 PA&E Automation Support								
		C4 Assessment Tool O&M								
	3rd Qtr:	C4 PA&E Automation Support								
		C4 Assessment Tool O&M								

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DATE : February 1997

## RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE						
RDT&E, Defense Wide/07		Joint/Defense Information Systems Engineering and Integration 0302019K						
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02
CINC/JTF C4 Integration/T66	0	1.620*	1.691	1.823	1.936	2.064	2.109	2.158

4th Qtr:	C4 PA&E Automation Support C4 Assessment Tool O&M CINC C4 Annual Summary							
FY 1999 1st Qtr:	1st Draft of each CINCS C4 PA&E Plan C4 PA&E Automation Support C4 Assessment Tool O&M							
2nd Qtr:	Final Draft of each CINCS C4 PA&E Plan C4 PA&E Automation Support C4 Assessment Tool O&M							
3rd Qtr:	C4 PA&E Automation Support C4 Assessment Tool O&M							
4th Qtr:	C4 PA&E Automation Support C4 Assessment Tool O&M CINC C4 Annual Summary							

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## RDT&amp;E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE: February 1997

APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE					
RDT&E, Defense Wide/07		Joint/Defense Information Systems Engineering and Integration 0302019K/CINCPAC/JTF C4 Integration/r66					

A. Project Cost Breakdown: (\$000)										
	FY96	FY97	FY98	FY99	FY97	FY99				
Project Cost Categories										
a. Systems Engineering	0	1,620	1,691	1,823						
TOTAL	0	1,620	1,691	1,823						
B. Budget Acquisition History and Planning Information: support and Management Organizations										
Contractor or Government Performing Activity	Contract Method/Type	Award or Obligation Vehicle	Performing Activity Date	Project Office EAC	Prior to Budget FY96	Budget FY97	Budget FY98	Budget FY99	Budget to Complete Program	Total Program
Multiple Performing Activities	CPAF	CPFF	MIPR		0	1,620	1,691	1,823	Contg	Contg
Government Furnished Property: N/A										
TOTAL PROJECT					0	1,620	1,691	1,823		

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE : February 1997					
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE								
RDT&E, Defense Wide/07				PE 0303126K/Long Haul Communications								
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete			
Total PE Cost: PE 0303126K	17.788	22.479	14.520	15.254	8.746	9.047	9.241	9.457	Contg			
Commercial Satellite Communications Init./E25	7.254	7.464	0	0	0	0	0	0	0			
Leading Edge Pilot Info. Technologies/E26	2.044	2.854	3.060	3.114	3.222	3.335	3.519	3.597	Contg			
MILSATCOM & DII Planning/E61	4.329	4.211	4.797	4.883	5.053	5.227	5.226	5.353	Contg			
Defense Info. Systems Network Acquisition/H20	1.131	7.496	6.200	6.800	0	0	0	0	21.627			
Defense Message System/H80	2.584	*	0	0	0	0	0	0	Contg			
White House Situation Support Staff/W90	0.446	0.454	0.463	0.457	0.471	0.485	0.496	0.507	Contg			

**A. Mission Description and Budget Item Justification:** This program element funds system engineering and test & evaluation for the Defense Communications System (DCS) / Defense Information Systems Network (DISN) which provides Defense-wide communications for the day-to-day operations of the DOD and serves as the core of DOD wartime communications for the National Command Authorities (NCA), the Joint Chiefs of Staff (JCS), the Commanders-in-Chief (CINCs), and other critical users. This PE provides for the engineering to consolidate the operational communications networks into DISN and for the technologies, commercial equipments and service offerings to reduce the cost of the DCS/DCSN and to provide valuable new information services to users.

The PE consists of 6 projects. Project E25 develops and implements a commercial satellite communications system pilot program in support of the DISN. Project E26 supports Leading Edge Pilot Services which include information for worldwide DOD user and research communities. Project E61 supports the planning and decision management to provide responsive communications and information services to support evolving military missions. Project H20 covers DISN,

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**RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)**

DATE : February 1997

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
RDT&E, Defense Wide/07	PE 0303126K/Long Haul Communications

architecture and integration activities and service contracts. Project H80 supports the development of the Defense Message System (DMS) which is designed to provide the defense community a more interoperable and cost effective messaging service. Project W90 supports engineering to provide full level crisis management capabilities for the White House. This program element is under Budget Activity 07 because it involves efforts supporting operational systems development.

\* Project H80 has been transferred to PE 0303129K in FY 1997.

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)								DATE : February 1997			
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/07				R-1 ITEM NOMENCLATURE PE 0303126K/Long Haul Communications							
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to complete	Total Cost
Project E25 Commercial Satellite Communications Initiative Follow-On	7.254	7.464	0	0	0	0	0	0	0	0	44.718

A. Mission Description & Budget Item Justification:

(U) This project develops and implements pilot capabilities for a proof of concept using available commercial satellite communications capabilities. This program establishes a seed pilot network, a tool for networking planning, development of a bandwidth management capability for leased whole transponders, and validation of a concept to reduce DOD commercial satellite telecommunications costs by bundling of individual circuit leases and by consolidating telecommunications requirements on whole transponders. The pilot network will offer a variety of services that are presently not available, such as downloading high data rate information from airborne vehicles via commercial satellites to processing centers, and dissemination of information to remote users. This program will demonstrate how to integrate commercial satellite capabilities with the Defense Information System Network (DISN) and Defense Satellite Communications System (DSCS).

(U) FY 1996 Accomplishments:

- Continue contracts and extend services to new regions (\$7.254 M)
- Validate new contracts
- Expand pilot network services (Ongoing)
  - Serve telemedicine, meteorological and ships at sea applications
- Support Bosnia Peace Keeping

\$7.254M Total

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE : February 1997
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					
					PE 0303126K/Long Haul Communications					
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
Project E25 Commercial Satellite Communications Initiatives Follow-On	7.254	7.464	0	0	0	0	0	0	0	44.718

(U) FY 1997 Plans:

- o Expand pilot services (\$7.464 M Ongoing)
- o Validate concepts (4Q97)
  - sustainable customer base established, integration with DSCS and DISN, final reports and business plan

\$7.464M Total

Acquisition Strategy: All services and equipment are to be competitively procured.

B. Program Change Summary

	FY 96	FY 97	FY 98	FY 99	
Previous President's Budget (FY 1997)	7.263	7.636	0	0	Total Cost
Appropriated Value	8.000	7.636			44.899
Adjustments to Appropriated Value	-.746	-.172			
Adjustments to Budget Year Since FY 1997 President's Budget					
Current Budget Submit/President's Budget	7.254	7.464			
Change Summary Explanation:					
Funding: FY 96 and FY97 reduction due to Congressional adjustment to Defense-wide Investment Appropriation.					

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DATE: February 1997

## RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE			
				PE 0303126K/Long Haul Communications			
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02
Project E25 Commercial Satellite Communications Initiatives Follow-on	7.254	7.464	0	0	0	0	0

Schedule: N/A

Technical: N/A

C. Other Program Funding Summary: N/A

## D. Schedule Profile:

Fiscal Year actual and planned events by quarter.

FY 1996				FY 1997			
1	2	3	4	1	2	3	4

## Engineering Milestones:

Award VSAT Terminal

Award transponder and bandwidth contract

## T&amp;E milestones:

Validated Bmc/Control X

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RDTE & PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)		DATE : February 1997
<b>APPROPRIATION/BUDGET ACTIVITY</b> RDTE, Defense Wide/07	<b>R-1 ITEM NOMENCLATURE</b> PE 0303126K/Long Haul Communications/E25/ COMMERCIAL SATELLITE COMMUNICATIONS INITIATIVES FOLLOW-ON	
A. Project Cost Breakdown (\$000)		
Project cost categories	<u>FY 96</u>	<u>FY 97</u>
1. Travel	25	25
2. Management Support Services	300	300
3. Engineering & Technical Services	6,929	7,139
Total	7,254	7,464
B. Budget Acquisition History and Planning Information:	N/A	

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997			
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					PE 0303126K/Long Haul Communications			
RDT&E, Defense Wide/07		COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
Project E26 Leading Edge Pilot Information Technology	2.044	2.854	3.060	3.114	3.222	3.335	3.519	3.597	Contg	Contg	Contg	Contg	
<p>A. <u>Mission Description &amp; Budget Item Justification:</u> Leading Edge Pilot Services are information transport and value added services which are not available from the Defense Information Infrastructure (DII) and for which customers are willing to assume some of the risk associated with development of initial deployment. These services may include information processing, storage, and retrieval; communications (voice, data, video, multimedia); and security technologies and applications in command, control, and intelligence for the worldwide DOD user and research communities. This program supports the acquisition and delivery of consolidated advanced technology information services in a maximally competitive environment (as cost effectively as is possible) to customers with operational needs that exceed those capabilities currently available from the DII. The resulting services will be managed in the operational context of the single information DII, operated and maintained by DISA. The DISA/ARPA Advanced Information Technology Services Joint Program Office (AITS-JPO) will integrate advanced technology research and development efforts from ARPA and others, focus the flow of these technologies from R&amp;D to widespread experimental uses, to leading edge and from leading edge to maximize the potential for migration into the DII and the National Information Infrastructure (NII). The DISA funding under this program element will allow the AITS-JPO to leverage research and development funding and efforts.</p>													
<p>(U) <u>FY 1996 Accomplishments:</u></p> <ul style="list-style-type: none"> <li>o Monitor candidate information system technologies which are still research and development for potential integration into the AITS-JPO Pilot Service portfolio. (\$100K) (1st Qtr - 4th Qtr)</li> <li>o Participate, initiate, expedite, or collaborate in Advanced Concepts Technology Demonstrations (ACTD's) in support of leading edge technology services. (\$184K) (1st Qtr - 4th Qtr)</li> <li>o Evaluate available candidate Advanced Information Technology (AIT) services versus user requirements and select promising technologies for pilot service. (\$584K) (1st Qtr - 4th Qtr)</li> <li>o Develop and coordinate plans and strategies for migration of Leading Edge Services into the DII. (\$868K) (1st Qtr - 4th Qtr)</li> <li>o Migrate video teleconferencing services to the DII. (\$50K) (1st Qtr - 4th Qtr)</li> <li>o Evaluate and integrate interim call encryption security devices for the modeling and simulation and high performance computing users. (\$208K) (1st Qtr - 4th Qtr)</li> <li>o Evaluate Asynchronous Transfer Mode (ATM) multicast services for the modeling and simulation users. (\$50K) (1st Qtr - 4th Qtr)</li> </ul> <p>\$2.044M Total</p>													

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APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/07								DATE: February 1997			
RD&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)				R-1 ITEM NOMENCLATURE PE 0303126K/Long Haul Communications							
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
Project E26 Leading Edge Pilot Information Technology		2.044	2.854	3.060	3.114	3.222	3.335	3.519	3.597	Contng	Contng
<p>(U) <u>FY 1997 Plans:</u></p> <ul style="list-style-type: none"> <li>o Monitor candidate information system technologies and capabilities which are still in research and development for potential integration into the AITS-JPO Pilot Service portfolio (\$100K) (1st Qtr - 4th Qtr)</li> <li>o Participate, initiate, expedite, or collaborate in Advanced Concepts Technology Demonstrations (ACTD's) in support of leading edge technology services. (\$100K) (1st Qtr - 4th Qtr)</li> <li>o Evaluate available candidate AIT services versus user requirements and select promising technologies for pilot service (\$700K) (1st Qtr - 4th Qtr)</li> <li>o Develop and coordinate plans and strategies for migration of Leading Edge Services into the DII. (\$950K) (1st Qtr - 4th Qtr)</li> <li>o Migrate selected modeling and simulation services to the DII. (\$400K) (1st Qtr - 4th Qtr)</li> <li>o Integrate first production key agile cell encryption devices for modeling and simulation users (\$239K) (1st Qtr - 2nd Qtr)</li> <li>o Enhance emerging band width-aware and end-to-end security pilot services (\$155K) (1st Qtr - 4th Qtr).</li> <li>o Integrate ATM multicast services for modeling and simulation users (\$200K) (1st Qtr - 4th Qtr)</li> </ul> <p>\$2.854M Total</p>											
<p>(U) <u>FY 1998 Plans:</u></p> <ul style="list-style-type: none"> <li>o Develop and implement emerging technologies in order to identify potential candidates to migrate into advanced DOD-wide applications and services. (\$1,060K) (1st Qtr - 4th Qtr)</li> <li>o Evaluate and implement emerging standards and protocols into pilot services network (\$1,000K) (1st Qtr - 4th Qtr)</li> <li>o Develop and coordinate plans and strategies for migration of leading edge services to the DII. (\$1,000K) (1st Qtr - 4th Qtr)</li> </ul> <p>\$3.060M Total</p>											
<p>(U) <u>FY 1999 Plans:</u></p> <ul style="list-style-type: none"> <li>o Perform program and engineering analysis of candidate leading edge information technologies test of pilot operations and demonstrations of leading edge technologies for migration into the DII. (1st Qtr - 4th Qtr) \$3.114M Total</li> </ul>											

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997	
APPROPRIATION/BUDGET ACTIVITY										R-1 ITEM NOMENCLATURE	
RDT&E, Defense Wide/07										PE 0303126K/Long Haul Communications	
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost	Contng
Project E26 Leading Edge Pilot Information Technology	2.044	2.854	3.060	3.114	3.222	3.335	3.519	3.597	Contng	Contng	
Acquisition Strategy: Develop and implement statements of work and task orders to support FFRDC and SETA Contracts.											
B. <u>Program Change Summary</u>											
Previous President's Budget (FY 1997)											
Appropriated Value											
Adjustments to Appropriated Value											
Adjustments to Budget Year Since FY97 President's Budget											
Current Budget Submit/President's Budget (FY 1998)											
Change Summary Explanation:											
Funding:											
FY96 and FY97 reduction due to Congressional adjustment to Defense-wide Investment Appropriation.											
FY98 and FY99 changes are due to revised fiscal guidance.											
Schedule:	N/A										
Technical:	N/A										
C. <u>Other Program Funding Summary:</u>											
O&M											
FY96											
2.355											
FY97											
2.658											
FY98											
2.736											
D. <u>Schedule Profile</u>											
Fiscal Year actual and planned events by quarter.											
FY96											
1 2 3 4											
X											
FY97											
1 2 3 4											
X											
FY98											
1 2 3 4											
X											
FY99											
1 2 3 4											
X											
SOW for SETA Support											
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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)				DATE: February 1997
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE			
RDT&E, Defense Wide/07	PE 0303126K/Long Haul Communications/E26 Leading Edge			Pilot Info Tech
A: Project Cost Breakdown	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>
Project Cost Categories				
Modeling & Simulation	2,044	2,854	3,060	3,114
Total	2,044	2,854	3,060	3,114
B: Budget Acquisition History and Planning Information:	N/A			

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RD&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997			
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					PE 0303126K/Long Haul Communications			
RDT&E, Defense Wide/07		COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
Project E61 MILSATCOM and Defense Information Infrastructure (DII) Planning	4.329	4.211	4.797	4.883	5.053	5.227	5.226	5.353	5.353	5.353	5.353	Contng	Contng

A. Mission Description & Budget Item Justification: The rapid evolution of the global military environment is driving a major evolution of the DOD force structure and military operations requiring greater flexibility to meet the global warfighting requirements to rapidly project forces anywhere in the world. This project supports the planning and decision management required to provide responsive communications and information services to support the evolving military missions. The efforts support integrated DOD communications planning and investment strategy for the successful deployment of DoD information systems by performing a broad spectrum of activities in support of C4I programs including modeling, simulation, focused testing, evaluation, and performing technical and operational assessment techniques on emerging technologies. This work is essential to achieve the DISA goal of quality information services at an affordable cost through a deliberate decision management process. Part of the work is being the leader in C4I models, decision tools, and technical, economic and mitigation risk assessments. The warfighter is provided electronic simulated field combat training aids and assessment of contingency operations and exercises through this project.

(U) FY96 Accomplishments:

- o JCDSC: Continue upgrading the JCDSC, developing advanced planning tools and databases. (\$832K) (2nd Qtr - 4th Qtr)
- o C4I Simulation Integration: Migrate to a common family of models for training, planning and assessment. (\$950K) (2nd Qtr - 4th Qtr)
- o C4I/Defense Information Infrastructure (DII) Assessment: Provide assessment support to DISA and the operational community. (\$654K) (2nd Qtr - 4th Qtr)
- o Joint Staff Support: Provide analysis and decision management support to the warfighters in the realization of C4IITW. (\$519K) (2nd Qtr - 4th Qtr)
- o Integrated Network Assessments: Assess military and commercial telecommunications alternatives to resolve programmatic issues. (\$1374K) (2nd Qtr - 4th Qtr)

\$4.329M Total

(U) FY97 Plans:

- o Integrated Communication Data Base (ICDB) (\$369K) (1st Qtr - 3rd Qtr)
- o C4I Simulation Integration: Migrate to a common family of models for training, planning and assessment. (\$985K) (1st Qtr - 4th Qtr)
- o C4I/DII Assessment: Provide assessment support to DISA and the operational community. (\$465K) (1st Qtr - 4th Qtr)
- o Joint Staff Support: Provide analysis and decision management support to the warfighters in the realization of C4IITW. (\$1612K) (1st Qtr - 4th Qtr)

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RD&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE: February 1997		
APPROPRIATION/BUDGET ACTIVITY							R-1 ITEM NOMENCLATURE		
RD&E, Defense Wide/07							PE 0303126K/Long Haul Communications		
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete
Project E61 MILSATCOM and Defense Information Infrastructure (DII) Planning	4.329	4.211	4.797	4.883	5.053	5.227	5.226	5.353	Contg
o Integrated Network Assessments: Assess military and commercial telecommunications alternatives to resolve programmatic issues. (\$550K) (1st Qtr - 4th Qtr)									
o C4I Model: Develop a DOD-wide C4I simulator to support mission test, training and operational exercises. (\$230K) (1st Qtr - 4th Qtr)									
\$4.211M Total									
(U) <u>FY98 Plans:</u>									
o Integrated Communication Data Base (ICDB) (\$369K) (1st Qtr - 4th Qtr)									
o C4I Simulation Integration (\$985K) (1st Qtr - 4th Qtr)									
o C4I/DII Assessment (\$465K) (1st Qtr - 4th Qtr)									
o Joint Staff Support (\$1,611K) (1st Qtr - 4th Qtr)									
o Integrated Network Assessments (\$550K) (1st Qtr - 4th Qtr)									
o C4I Model (\$230K) (1st Qtr - 4th Qtr)									
\$4.797M Total									
(U) <u>FY99 Plans:</u>									
o Integrated Communication Data Base (ICDB) (\$309K) (1st Qtr - 4th Qtr)									
o C4I Simulation Integration (\$1,220K) (1st Qtr - 4th Qtr)									
o C4I/DII Assessment (\$556K) (1st Qtr - 4th Qtr)									
o Joint Staff Support (\$1,966K) (1st Qtr - 4th Qtr)									
o Integrated Network Assessments (\$585K) (1st Qtr - 4th Qtr)									
o C4I Model (\$250K) (1st Qtr - 4th Qtr)									
\$4.883M Total									

Acquisition Strategy: SETA support contract (CPFF-LOE) was competitively awarded and consists of a base year and four option years. FFRDC support is procured sole source through the sponsoring Service (e.g., the Army for MITRE)

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APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/07							R-1 ITEM NOMENCLATURE PE 0303126K/Long Haul Communications				DATE: February 1997	
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost	
Project E61 MILSATCOM and Defense Information Infrastructure (DII) Planning	4.329	4.211	4.797	4.883	5.053	5.227	5.226	5.353	5.353	Contg	Contg	
<b>B. Program Change Summary</b>												
Previous President's Budget (FY 1997)										<u>FY97</u>	<u>FY98</u>	<u>FY99</u>
Appropriated Value										4.113	4.671	4.780
Adjustments to Appropriated Value										4.279	4.671	
Adjustments to Budget Year Since FY 1997 President's Budget										.050	-.460	
Current Budget Submit/President's Budget (FY 1998)											.048	.103
Change Summary Explanation:												
Funding:												
Schedule:												
Technical:												
<b>C. Other Program Funding Summary</b>												
O&M										<u>FY96</u>	<u>FY97</u>	<u>FY98</u>
										3.244	3.549	3.390

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## RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

DATE: February 1997

APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/07		R-1 ITEM NOMENCLATURE PE 0303126K/Long Haul Communications									
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
Project E61 MILSATCOM and Defense Information Infrastructure (DII) Planning	4.329	4.211	4.797	4.883	5.053	5.227	5.226	5.353	Contg	Contg	Contg

D. Schedule Profile

Fiscal Year actual and planned events by quarter.

	FY96 1 2 3 4	FY97 1 2 3 4	FY98 1 2 3 4	FY99 1 2 3 4
Execute option year of SETA support contract	X	X	X	X
Execute FERDC support (MIPRs)	X	X	X	X

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RDTE PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)		DATE: February 1997	
APPROPRIATION/BUDGET ACTIVITY	PE 0303126K/Long Haul Communications/E61/MILSATCOM	R-1 ITEM NOMENCLATURE	
A. Project Cost Breakdown (\$000)		FY96	FY98
Project Cost Categories		FY97	FY99
Modeling & Simulation	4,329	4,211	4,797
Total	4,329	4,211	4,797
B. Budget Acquisition History and Planning Information:	N/A		

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RD&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE: February 1997		
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE					
				PE 0303126K/Long Haul Communications					
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete
Project H20 Defense Information System Network (DISN) Acquisition	1.131	7.496	6.200	6.800	0	0	0	0	21.627

A. Mission Description & Budget Item Justification: DISN provides the Warfighters and the warfighting Commanders in Chief (CINCS), Joint Task Force (JTF) Commanders and Combined Task Force (CTF) Commanders with a robust C4I information transfer infrastructure. This infrastructure is the only subset of the Defense Information Infrastructure (DII) primarily providing transport. DISN will provide the Warfighters with U.S. Government controlled, secure, switched voice and data, imagery, video teleconferencing, and dedicated point-to-point connectivity. It directly supports national defense C4I decision support requirements, Corporate Information Management (CIM) functional businesses, and U.S. efforts to maintain the world-wide lead in defensive information warfare. This project supports the acquisition of the DISN Services for CONUS, Hawaii Information Transfer System (HITS), Deployable, Pacific, Europe, Information Dissemination Management (IDM), and Integrated Communications Database (ICDB).

(U) FY 1996 Accomplishments:

- o Provide acquisition technical support to CONUS. (\$272K) (1st Qtr - 4th Qtr)
- o Provide Mobile Satellite Services (MSS) technical support. (\$172K) (1st Qtr - 4th Qtr)
- o Perform ITSDN Testing to Deployed. (\$208K) (1st Qtr - 4th Qtr)
- o Develop Systems Design OCONUS (Pacific & Europe). (\$479K) (1st Qtr - 4th Qtr)

\$1.131M Total

(U) FY 1997 Plans:

- o Develop security firewalls for fixed Mobile Satellite Services (MSS) gateway. (\$1459K) (1st Qtr - 2nd Qtr)
- o Conduct feasibility study and design for Deployable MSS gateway. (\$1290K) (1st Qtr)
- o Demonstrate (as a proof of concept) DOD's capability to interface with commercial fiber optics cable operations. Establishment of this capability will free the space segment to support operations, while fiber supports the high capacity administrative and logistics requirements. (\$4542K) (2nd Qtr - 4th Qtr)
  - oo Develop the foundation to advance DISN capabilities to meet the JTF high bandwidth requirements and provide integrated services.

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RDTE BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE : February 1997		
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE					
RDTE, Defense Wide/07				PE 0303126K/Long Haul Communications					
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete
Project H20 Defense Information System Network (DISN) Acquisition	1.131	7.496	6.200	6.800	0	0	0	0	21.627

oo Develop strategy to support DOD bandwidth surge capabilities in future commercial transoceanic cable laying projects.

oo Develop concept of operations for expanding transoceanic fiber based communications infrastructure inland where a high bandwidth infrastructure does not exist.

oo Communicate DOD needs to rapidly deploy a fiber based global infrastructure for industry to include in future R&D programs.

oo Demonstrate capability to expand fiber optic links from existing commercial cable heads to newly established cable heads and rapidly deploy a high bandwidth infrastructure to support the JTF.

o Provide technical support to DISN architecture and integration group and continue requirements gathering and assessment in support of post-JSMB efforts. (\$205K) (2nd Qtr)

\$7.496M Total

(U) FY 1998 Plans:

- o Advanced concept development of a DoD Information Dissemination Management (IDM) capability. (\$6.200M) (2nd - 4th Qtr)

(U) FY 1999 Plans:

- o Continue development of a DoD IDM capability and begin testing IDM concepts. (\$6.800M) (3rd - 4th Qtr)

Acquisition Strategy:

- FY96: FFRDC Support (MITRE)
- FY97: FFRDC Support (MITRE), MSS Contract Award, SAIC Support

RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE: February 1997		
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE					
RDT&E, Defense Wide/07				PE 0303126K/Long Haul Communications					
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete
Project H20 Defense Information System Network (DISN) Acquisition	1.131	7.496	6.200	6.800	0	0	0	0	21.627
<b>B. Program Change Summary</b>									
Previous President's Budget (FY 1997)				<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>		<u>Total Cost</u>
Appropriated Value				2.131	7.558	0	0		13.307
Adjustments to Appropriated Value				1.244	7.558				
Adjustments to Budget Year Since FY 1997 President's Budget				-.113	-.062				
Current Budget Submit/President's Budget (FY 1998)				1.131	7.496	6.200	6.800		
Change Summary Explanation:						6.200	6.800		
Funding: FY96 and FY97 changes due to below threshold reprogrammings and Congressional adjustments.									
FY98 and FY99 changes are due to initiative on Information Dissemination Management.									
<b>C. Other Program Funding Summary</b>									
O&M	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>		<u>Total Cost</u>
O&M	7.324	9.626	4.488	5.458	5.524	5.469	5.469	Cont	
<b>D. Schedule Profile</b>									
(U) <u>FY 1996</u>									
(U) <u>FY 1997</u>									
(U) <u>FY 1998</u>									
(U) <u>FY 1999</u>									
MITRE Award									
MITRE Award									
MSS Contract Award and SAIC Award									
Global Fiber/TAC Interface Contract Award									
TBD									

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE: February 1997
APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE				
			PE 0303126K/Long Haul Communications/H20 DISN Acquisition				
A.	Project Cost Breakdown (\$000)		<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	
	Engineering and Technical Services			1,131	7,496	6,200	6,800
	Total			1,131	7,496	6,200	6,800
B. Budget Acquisition History and Planning Information:							
Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior To FY96	Budget FY97	Budget FY98
Product Development Organizations	MITRE	01 Oct 94	2284	1361	923	0	0
All other contract				208	7496	6200	6800
	Subtotal Contracts			1131	7496	6200	6800

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)								DATE : February 1997			
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/07				R-1 ITEM NOMENCLATURE PE 0303129K/Long Haul Communications							
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
Project H80 Defense Message System (DMS)	2.584	*	0	0	0	0	0	0	0	Contg	Contg
A. Mission Description & Budget Item Justification: The purpose of this project is to provide system engineering to ensure that the Joint Staff (JS) and OSD (C3I) validated messaging requirements are satisfied through the use of a COTS-based, multi-level secure messaging and directory service. The DMS provides the defense community with a more interoperable, cost effective messaging/directory/management services than that which is in place today. Current support is focused on developing secure messaging/directory/management services through requirements definition and refinement; target component Development, Initial and Final Operational Test and Evaluation (DTE, IOT&E and FOT&E); developing transitional interoperability requirements and components/services; technology insertion and service demonstrations; and influencing industry to include DMS features as part of their standard product offerings. * This project is funded in PE0303129K beginning in FY1997.											
(U) <u>FY 1996 Accomplishments:</u> <ul style="list-style-type: none"> <li>o Redesign DMS Target Architecture and Implementation strategy (TAIS) to reflect changes in security products/solutions, additional definition of Joint Task Force (JTF) and tactical user/environment, and program milestones. Work with DMS vendor to finalize initial topology, design, network sizing, planning, and phasing for the networks, including DISN transport. (\$716K) (1st Qtr - 4th Qtr)</li> <li>o Support DMS Test and Evaluation (T &amp; E) efforts including finalization of Compliancy Definition, Site Acceptance Recommendations, and observation, analysis/evaluation of IOT&amp;E test execution. (\$220K) (1st Qtr - 4th Qtr)</li> <li>o Develop and promote DOD/DMS requirements and positions on data communications protocol issues via military and civilian, national and international standards fora. Feeds into this effort include participation in Joint Warrior Interoperability Demonstration (JWID), Electronic Commerce/Electronic Data Interchange (EC/EDI), and other integration/demonstration efforts. (\$110K) (1st Qtr - 4th Qtr)</li> <li>o Develop user registration strategy/plan, finalize management staffing analysis for LCC, refinement of management concepts via management capability prototyping. (\$540K) (1st Qtr - 4th Qtr)</li> </ul>											
\$2.584M Total											

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RDTE&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE: February 1997		
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE					
RDTE&E, Defense Wide/07				PE 0303126K/Long Haul Communications					
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete
Project H80 Defense Message System (DMS)	2.584	*	0	0	0	0	0	0	Contg

(U) FY 1997 Plans:  
This project has been transferred to PE 0303129K.

B. Program Change Summary

	FY96	FY97	FY98	FY99
Previous President's Budget (FY 1997)	2.589	0	0	0
Appropriated Value	2.850			0
Adjustments to Appropriated Value				0
Adjustments to Budget Year Since FY 1997 President's Budget				0
Current Budget Submit/President's Budget (FY 1998)	2.584	0	0	0

Change Summary Explanation:  
Funding: FY96 reduction due to Congressional adjustments.  
\*FY97 funding is in PE 0303129K.

Schedule: N/A  
Technical: N/A

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)								DATE: February 1997			
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/07				R-1 ITEM NOMENCLATURE PE 0303126K/Long Haul Communications							
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
Project H80 Defense Message System (DMS)		2.584	*	0	0	0	0	0	0	0	Contg
C. Other Program Funding Summary											Contg
		<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>		
O&M		20.510	35.620	37.109	38.967	24.228	17.642	18.008	18.433		
PROCUREMENT		27.825	41.362	44.470	44.289	29.719	20.592	21.076	21.606		

D. Schedule Profile

(U) FY 1996

Acquisition Milestones

Pre-MAISRC (DISA Internal)	(2 Qtr)
MAISRC (MS III)	(3 Qtr)

Engineering Milestones

TAIS Redesign	(1 Qtr)
API Standard	(1 Qtr)
EC/EDI Capabilities Report	(2 Qtr) / Test Plan
DMS Security Architecture (classified)	(3 Qtr)
Tactical Standardized Profile (draft)	(3 Qtr)

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE : February 1997			
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE						
RDT&E, Defense Wide/07				PE 0303126K/Long Haul Communications/H80/DMS						
A. Project Cost Breakdown (\$000)				<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>			
Project Cost Categories										
a. Engineering and Technical Services				2,584	0	0	0			
Total				2,584	0	0	0			
B . Budget Acquisition History and Planning Information										
Contractor or Government	Contract Method/Type	Award or Obligation	Performing Activity	Project Office	Budget FY96	Budget FY97	Budget FY98	Budget To Complete		
Performing Activity	or Funding Vehicle	Date	<u>EAC</u>	<u>EAC</u>	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	Total Program		
Product Development Organizations										
Booz-Allen	MIPR and/or PR 15 Nov 94	3697	3697	1022	0	0	0	Contig		
Support and Management Organizations								Continuing		
MITRE	MIPR	01 Oct 94	13005	13005	1562	0	0	Contig		
Subtotal Contracts				2584	0	0	0	Continuing		

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)								DATE: February 1997	
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE					
RDT&E, Defense Wide/07				PE 0303126K/Long Haul Communications					
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete
Project W90 White House Situation Support Staff	.446	.454	.463	.457	.471	.485	.496	.507	Total Cost

A. Mission Description and Budget Item Justification:

This project ensures that full level crisis management capabilities are provided to the President, Vice President, the National Security Advisor and his staff. This effort emphasizes information exchange and display and procedures. This project is part of the National Security Information and Situation Management System (NSI & SMS)

FY1996 Accomplishments

- o Continued development of Decision Support Systems for the White House Situation Room. (\$446K) (1st Qtr - 3rd Qtr)

(U) FY 1997 Plans:

- o Continue development of Decision Support Systems for the White House Situation Room. (\$454K) (2nd Qtr - 3rd Qtr)

(U) FY 1998 Plans:

- o Continue development of Decision Support Systems for the White House Situation Room. (\$463K) (2nd Qtr - 3rd Qtr)

(U) FY 1999 Plans:

- o Continue development of Decision Support Systems for the White House Situation Room. (\$457K) (2nd Qtr - 3rd Qtr)

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## RDT&amp;E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

DATE: February 1997

APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE									
RDT&E, Defense Wide/07		PE 0303126K/Long Haul Communications									
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
Project W90 White House Situation Support Staff		.446	.454	.463	.457	.471	.485	.496	.507	Contng	Contng

## B. Program Change Summary

	FY96	FY97	FY98	FY99
Previous President's Budget (FY 1997)	.445	.467	.464	.459
Appropriated Value	.483	.467	.464	.459
Adjustments to Appropriated Value	-.037	-.013		
Adjustments to Budget Year since FY 1997 President's Budget				
Current Budget Submit/President's Budget (FY 1998)	.446	.454	.463	.457
Change Summary Explanation:				

Funding: FY96 and FY97 reductions are due to Congressional adjustment to Defense-wide Investment Appropriation.

Schedule: N/A  
Technical: N/A

## C. Other Program Funding Summary:

	FY96	FY97	FY98	FY99	To Complete	Total Cost
Procurement Line P-1	2.235	1.600	1.851	1.739	Contng.	Contng.
O&M	2.352	2.827	2.723	3.053	Contng.	Contng.

RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997		
APPROPRIATION/BUDGET ACTIVITY										R-1 ITEM NOMENCLATURE		
RDT&E, Defense Wide/07										PE 0303126K/Long Haul Communications		
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost	Contng	Contng
Project W90 White House Situation Support Staff	.446	.454	.463	.457	.471	.485	.496	.507				

D. Schedule Profile

(U) FY1996  
T&E Milestones:  
Continue development of Decision Support Systems for the White House Situation Room (3rd qtr FY96)

(U) FY1997  
Contract Milestones:  
Contract/Study to be delivered (3rd qtr FY97)

(U) FY1998  
Contract Milestones:  
Contract/study to be delivered (3rd qtr FY98)

(U) FY1999  
Contract Milestones:  
Contract/study to be delivered (3rd qtr FY99)

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RDTEC PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE: February 1997

<b>APPROPRIATION/BUDGET ACTIVITY</b>		<b>R-1 ITEM NOMENCLATURE</b>			
RDT&E, Defense Wide/07		PE 0303126K/Long Haul Communications/W90/WHSSS			

A. Project Cost Breakdown (\$000)

Project Cost Categories

a. Engineering and Technical Services

FY96   FY97   FY98   FY99

446      454      463      457

B. Budget Acquisition History and Planning Information: N/A

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE: February 1997		
APPROPRIATION/BUDGET ACTIVITY							R-1 ITEM NOMENCLATURE		
RDT&E, Defense Wide/07							Support of the NCS/P.E. 0303127K		
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete
Total 0303127K Cost	3.486	3.808	4.552	4.545	4.507	5.358	5.473	5.602	Cont.
Enhanced Satellite Capability/N092	.439	.428	.519	.421	.421	.435	.444	.444	Cont.
Interoperability/N088	1.476	1.558	1.759	1.849	1.849	2.648	2.651	2.776	Cont.
Information Assurance/N094	.250	.503	.521	.525	.525	.525	.599	.599	Cont.
Advanced Intelligent Network/N091	1.117	1.115	1.298	1.280	1.242	1.280	1.300	1.304	Cont.
NS/EP Telecommunications Integration Support/N095	.204	.204	.455	.470	.470	.470	.479	.479	Cont.

## A. Mission Description and Budget Item Justification

This program element supports Executive Order 12472 of 3 April 1984 which assigns the NCS the mission of assisting the President, the National Security Council, the Office of Science and Technology Policy, and the Office of Management and Budget, in exercising their wartime and non-wartime telecommunications functions and responsibilities, and coordinating the planning for, and provisioning of, National Security and Emergency Preparedness (NS/EP) telecommunications for the federal government under all circumstances. To attain this objective, there are several National Security Decision Directives which provide additional guidance to the NCS which require that initiatives be developed that will improve the survivability and interoperability of the commercial telecommunications systems that support national security and emergency preparedness requirements, enhance the survivability and durability of U.S. commercial satellites, and provide communications support for Government agencies which have responsibilities to carry out their essential functions in any emergency. Additionally, this program element will support programs which will help to ensure that the evolving National Information Infrastructure will meet the needs of government NS/EP users. Enhanced Satellite Capability explores developing satellite technologies and applications which include experiment preparation and terminal modification to experiment with NASA's Advanced Communications Technology Satellite (ACTS), preparing secure voice experiments over American Mobile Satellite Corporation Mobile Satellite (MSAT), and the analysis of the newly proposed low earth systems. Interoperability supports the Federal Telecommunications Standards Program, and ensures interoperability among emerging government communications systems. Information Assurance (formerly Network Security) supports the Public Switched Network (PSN) in mitigating hacker threats. Advanced Intelligent Network employs newly developed processing capabilities to tailor the extensive telecommunications resources of the PSN. NS/EP Telecommunications Integration (formerly a subset of AN), provides a test and evaluation program to assess and evaluate the operational readiness and capabilities of NS/EP telecommunications programs, initiatives, and emerging technologies. This program element is under Budget Activity 07 because it involves efforts supporting operational systems development.

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APPROPRIATION/BUDGET ACTIVITY										DATE: February 1997		
RDT&E, Defense Wide/07										R-1 ITEM NOMENCLATURE		
Support of the National Communications System(NCS) /P.E. 0303127K												
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost	Cont.	Cont.
Enhanced Satellite Capability (BSC) /N092	.439	.428	.519	.421	.421	.435	.444	.444	.444	.444	Cont.	Cont.

A. Mission Description & Budget Item Justification:

This project will provide greatly enhanced and cost-effective telecommunications for all operational environments with the incorporation of new satellite communication technologies. ESC will acquire knowledge of evolving technologies; support development of National Security Telecommunications Advisory Committee (NSTAC) initiatives; evaluate new commercial satellite capabilities; assure that industry is aware of NS/EP requirements and stress the importance of these features in new systems; develop concepts and architectures for acquiring advanced satellite communications service and performing test and evaluation of acquired capabilities. Regarding acquisition strategy, work will continue under existing contract vehicles.

FY1996 Accomplishments:

- Conduct experiments utilizing an ACTS High Data Rate (HDR) terminal to test SONET, Broadband ISDN (BISDN), and ATM technologies in the KA spectrum of band width. (\$154K) (1st Qtr - 4th Qtr)
- Research potential of developing satellite technologies and systems: low earth orbit (LEO) and geostationary orbit satellites, and continue experimentation. (\$131K) (1st Qtr - 4th Qtr)
- Identify and determine candidate NS/EP National Information Infrastructure (NII) requirements (priority access, secure voice) that can be served via a satellite platform and experimentation. (\$154K) (1st Qtr - 4th Qtr) \$ .439M Total

FY1997 Plans:

- Analyze and document results of NCS ACTS High Data Rate Experiments. (\$59K) (1st Qtr - 4th Qtr)
- Perform experimentation of NS/EP NII requirements and summarize results. Emphasis of experimentation will be targeted toward evolving Mobile Satellite Systems and influencing their design to include NS/EP desired features (\$225K) (1st Qtr - 4th Qtr)
- Perform analysis of inventory and evaluate industry activities for the potential of meeting NS/EP requirements (\$144K) (1st Qtr - 4th Qtr) \$ .428M Total

FY1998 Plans:

- Support development of NS/EP capabilities (e.g., priority, security) on developing mobile satellite systems. (\$150K) (1st Qtr - 4th Qtr)

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE: February 1997					
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE								
RDT&E, Defense Wide/07				Support of the National Communications System(NCS) /P.E.0303127K								
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete			
Enhanced Satellite Capability/N092	.439	.428	.519	.421	.421	.435	.444	.444	Cont. Cont.			
O Perform testing and experimentation of NS/EP capabilities on existing and developing mobile satellite systems. (\$128K) (1st Qtr - 4th Qtr)												
O Conduct experiments utilizing emerging satellite systems to demonstrate the interoperability with other wireless systems and capabilities. (\$125K) (1st Qtr - 4th Qtr)												
O Continue project Planning of research, testing, evaluation, recommendations, and implementation of new technologies. (\$116K) (1st Qtr - 4th Qtr) \$.519M Total												
<u>FY 1999 Plans:</u>												
O Validate the ability of operational and developing mobile satellite systems to support NS/EP users. (\$100K) (1st Qtr - 4th Qtr)												
O Demonstrate and verify the interoperability between wireless systems, including satellite, cellular, and PCS technologies. (\$221K) (1st Qtr - 4th Qtr)												
O Continue implementation of NS/EP functional requirements in developing and planned mobile satellite systems. (\$100K) (1st Qtr - 4th Qtr) \$.421M Total												
<u>B. Program Change Summary</u>												
Previous President's Budget (FY 1997)	<u>FY 1996</u>			<u>FY 1997</u>		<u>FY1998</u>		<u>FY1999</u>				
Appropriated Value	.499			.479		.519		.421				
Adjustments to Appropriated Value												
Adjustments to Budget Year Since FY 97 President's Budget	.597			.479								
Current President's Budget (FY 1998)	-.158			-.051								
	.439			.428		.519		.421				

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997	
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE						
RDT&E, Defense Wide/07										Support of the National Communications System (NCS) / P.E. 0303127K	
Change Summary Explanation											
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost	
Enhanced Satellite Capability (ESC) /N092	.439	.428	.519	.421	.421	.435	.444	.444	Cont.	Cont.	
Funding: FY96 and FY97 reductions due to Congressional adjustments.											
Schedule:	N/A										
Technical:	N/A										
C. Other Program Funding Summary:	N/A										
D. Schedule Profile											
FY96 - 3rd quarter: Analysis of developing satellite systems and operational mobile satellite systems applicable to NS/EP users.											
FY97 - 3rd quarter: Analysis of operational mobile satellite systems and their relationship to the NS/EP community.											
FY98 - 3rd quarter: Analysis of developing satellite systems and operational mobile satellite systems applicable to NS/EP users.											
FY99 - 3rd quarter: Analysis of operational mobile satellite systems and their relationship to the NS/EP community.											

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RD&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE: February 1997

## APPROPRIATION / BUDGET ACTIVITY

RDT&E, Defense Wide/07

## R-1 ITEM NOMENCLATURE

Support of the National Communications System (NCS) / 0303127K/Enhanced Satellite Capability (NO92)

A. Project Cost Breakdown (\$000)		FY1996		FY1997		FY1998		FY1999	
Project Cost Categories									
Engineering & Technical Service		439		428		519		421	
Total		439		428		519		421	
B. Budget Acquisition History and Planning Information		(\$000)							
Performing Organizations									
Support & Management Organization	Budget	FY1996		Budget	FY1997	Budget	FY1998	Budget	FY1999
Test & Evaluation Organization		110			113		174		122
Total Project		329			315		345		299
		439			428		519		421

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997	
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE						Support of the National Communications System(NCS) /P.E.0303127K	
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
Interoperability/NO88	1.476	1.558	1.759	1.849	1.849	2.648	2.651	2.776	Cont.	Cont.	
<b>A. Mission Description &amp; Budget Item Justification:</b>											
This project analyzes new telecommunications technologies and their effects on interoperability of government communications and conducts related technical evaluations and standards development. Supports the Federal Telecommunications Standards Program. Ensures interoperability among emerging government communication systems, including information systems, by providing the required analyses to the NCS member organizations and other government agencies through the development of initial specification and correlation of standards for specific types of communication and information systems; the design of initial automated methods for application of standards to systems; the refinement and evaluation of program objectives in evolving technology environment. Regarding acquisition strategy, new reimbursable orders will be used.											
<b>FY1996 Accomplishments:</b>											
O Develop techniques and analyses to implement national security and emergency preparedness (NS/EP) requirements in emerging standards for wide-band networks and wireless services of the National Information Infrastructure.											
(§626K) (1st Qtr - 4th Qtr)											
O Develop strategies and detailed specification for methods of congestion control in asynchronous transfer mode (ATM) networks, to help ensure reliable NS/EP communications (\$400K) (1st Qtr - 4th Qtr)											
O Develop analytical methods for determining NS/EP quality requirements for multi-media communications over the National Information Infrastructure (\$450K) (1st Qtr - 4th Qtr) \$1.476M Total											
<b>FY1997 Plans:</b>											
O Develop additional and updated techniques for reliable and secure NS/EP communications in wide-band and wireless networks (\$652K) (1st Qtr - 4th Qtr)											
O Develop additional and updated methods and proposed standards for flow controlling asynchronous transfer mode congestion to help ensure reliable NS/EP communications (\$441K) (1st Qtr - 4th Qtr)											
O Develop analyses, methods, and standards for assessing quality of multi-media NS/EP communications (\$465K) (1st Qtr - 4th Qtr) \$1.558M Total											
<b>FY1998 Plans:</b>											
O Continue development of network management standards for congestion control in NS/EP services on high speed networks. (\$450K) (1st Qtr - 4th Qtr)											

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RDTE BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997	
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
RDT&E, Defense Wide/07				Support of the National Communications System(NCS) /P.E.0303127K							
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost	Cont.
Interoperability/N088	1.476	1.558	1.759	1.849	1.849	2.648	2.651	2.776	Cont.		
O Develop analyses and contributions to standards foras to support NS/EP services priority at intelligent network trigger detection Points (\$459K) (1st Qtr - 4th Qtr)											
O Assessment of emerging technology and NS/EP applications (\$350K) (1st Qtr - 4th Qtr)											
O Continue development of reliable and secure techniques for wireless networks and services (\$500K) (1st Qtr - 4th Qtr) \$1.759M Total											
<u>FY 1999 Plans:</u>											
O Continue to resolve impediments to interoperability of systems supporting government communications (\$450K) (1st Qtr - 4th Qtr)											
O Continue to analyze network management and congestion control of emerging high-speed digital networks to identify and solve NS/EP communication issues. (\$400K) (1st Qtr - 4th Qtr)											
O Continue to assess emerging technology and NS/EP application (\$399K) (1st Qtr - 4th Qtr)											
O Develop analyses and contributions in support of the development of video teleconferencing and multi-media standards (\$600K) (1st Qtr - 4th Qtr) \$1.849M Total											
<u>B. Program Change Summary</u>											
Previous President's Budget (FY 1997)											
Appropriated Value	FY 1996										
Adjustments to Appropriated Value		FY1997									
Adjustments to Budget Year Since FY 97 President's Budget											
Current President's Budget (FY 1998)											

## B. Program Change Summary

	FY 1996	FY1997	FY1998	FY1999
Previous President's Budget (FY 1997)	1.544	1.507	1.584	1.640
Appropriated Value		1.573	1.507	
Adjustments to Appropriated Value		-.097	.051	
Adjustments to Budget Year Since FY 97 President's Budget			.175	.209
Current President's Budget (FY 1998)	1.476	1.558	1.759	1.849

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997	
APPROPRIATION/BUDGET ACTIVITY										R-1 ITEM NOMENCLATURE	
RDT&E, Defense Wide/07										Support of the National Communications System(NCS) /P.E.0303127K	
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost	
Interoperability/N088	1.476	1.558	1.759	1.849	1.849	2.648	2.651	2.776	Cont.	Cont.	
Change Summary Explanation											
Funding:	FY96 reduction due to congressional adjustments.										
	FY97 change due to below threshold reprogramming.										
Schedule:	FY98 and FY99 changes due to revised fiscal guidance.										
Technical:	N/A										
C. Other Program Funding Summary:											
	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	Total Cost		
O&M	2.971	3.289	3.377	3.500	3.500	3.500	3.500	3.500	3.500	Cont.	
D. Schedule Profile											
FY96 - 3rd quarter: Receive report from Institute for Telecommunications Science on algorithm developed to quantify quality of multi-media transmission, from a user's perspective.											
FY97 - 2nd quarter: Receive report from National Institute of Standards and Technology on rapid (< 1 second) restoral of multi-megabit switched digital circuits.											
FY98 - 4th quarter: Receive reports on analyses and contributions on NS/EP applications to multi-media standards.											
FY99 - 4th quarter: Receive reports and assessments of emerging technology for NS/EP applications.											

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RDT&E PROGRAM ELEMENT / PROJECT COST BREAKDOWN (R-3)				DATE: February 1997
APPROPRIATION / BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE		
RDT&E, Defense Wide/07		Support of the National Communications System (NCS) / 0303127K/Interoperability (N088)		
A. Project Cost Breakdown	(\$000)	FY1996	FY1997	FY1998
Project Cost Categories				
Engineering & Technical Service		1,476	1,558	1,759
Total Project		1,476	1,558	1,759
B. Budget Acquisition History and Planning Information	(\$000)			
Performing Organizations				
Test & Evaluation Organization		Budget FY1996	Budget FY1997	Budget FY1998
Product Development Organization		1,163	1,209	1,418
Total Project		313	349	341
		1,476	1,558	1,759
				Total Program
				1,490
				Cont.
				Cont.
				Cont.

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RDTE BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997	
APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE								
RDT&E, Defense Wide/07			Support of the National Communications System(NCS) /P.E. 0303127K								
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost	Cont.
Information Assurance/N094	.250	.503	.521	.525	.525	.525	.525	.599	.599	.599	Cont.

**A. Mission Description & Budget Item Justification:**

This project, formerly titled Network Security, was initiated to mitigate the hacker threat posed to NS/EP telecommunications carried via the Public Switched Network (PSN). The research gained from this project will be used to develop a consistent framework of guidelines that will be useful to government and industry in assuring that critical software supporting and/or controlling telecommunications switches can be trusted to perform as required in support of PSN. Regarding acquisition strategy, new reimbursable orders will be used.

**FY1996 Accomplishments:**

- Develop software tools useful in identifying and eliminating security vulnerabilities from large computer programs such as those used in communications systems (\$125K) (1st Qtr - 4th Qtr)
- Evaluate security tools and techniques relevant to communication systems and provide guidelines for protecting communications systems from computer intruders (\$125K) (1st Qtr - 4th Qtr) \$ .250M Total

**FY1997 Plans:**

- Develop additional tools to identify and eliminate security vulnerabilities in large computer programs such as those used in communications systems. Update previously developed tools for application to emerging computer systems (\$301K) (1st Qtr - 4th Qtr)
- Evaluate additional security tools and techniques relevant to communications systems and provide updated guidelines (\$202K) (1st Qtr - 4th Qtr) \$.503M Total

**FY 1998 Plans:**

- Research and evaluate the application of existing and emerging software packages and other tools that enhance security in communications and information systems that support NS/EP (\$300K) (1st Qtr - 4th Qtr)
- Develop additional tools and procedural guidelines for NS/EP network security (\$221K) (1st Qtr - 4th Qtr) \$.521M Total

**FY 1999 Plans:**

- Continue researching and evaluating software tools for enhancing security in NS/EP telecommunications and information systems (\$300K) (1st Qtr - 4th Qtr)
- Continue developing tools and guidelines for protecting NS/EP systems as new threats and vulnerabilities emerge. (\$225K) (1st Qtr - 4th Qtr) \$.525M Total

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APPROPRIATION/BUDGET ACTIVITY										RD&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)			DATE: February 1997			
										R-1 ITEM NOMENCLATURE						
										Support of the National Communications System(NCS)/P.E.0303127K						
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost						
Information Assurance/N094	.250	.503	.521	.525	.525	.525	.525	.599	.599	.599						
B. Program Change Summary																
Previous President's Budget (FY 1997)																FY1999
Appropriated Value																.525
Adjustments to Appropriated Value																
Adjustments to Budget Year Since FY 97 President's Budget																
Current Budget Submit/President's Budget (FY 1998)																
Change Summary Explanation																
Funding: FY96 adjustment due to below threshold reprogramming.																
C. Other Program Funding Summary																
O&M	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	Total Cost							
	2.164	2.111	2.073	2.714	3.120	3.316	3.393	3.593	Cont.							
D. Schedule Profile																
FY96 - 4th quarter: Beta test version of "Decomposition Slicing" tool for analyzing effects of maintenance changes in large computer programs																
FY97 - 4th quarter: Evaluations of security features in switches performed by the Telecommunications Security Analysis Center																
FY98 - 4th quarter: Evaluations of emerging software tools for intrusion monitoring and detection in large computer and switching systems																
FY99 - 4th quarter: Software tools and procedures for enhancing NS/EP network security																
																Page 11 of 19

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RDTE & PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)		DATE : February 1997	
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE	
RDT&E, Defense Wide/07		Support of the National Communications System (NCS) /0303127K/Information Assurance (N094)	
A. Project Cost Breakdown	(\$000)	FY1996	FY1997
Project Cost Categories			
Engineering & Technical Service	250	503	521
B. Budget Acquisition History and Planning Information	N/A		

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)								DATE: February 1997		
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/07				R-1 ITEM NOMENCLATURE Support of the National Communications System(NCS) /P.E.0303127K						
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
Advanced Intelligent Network/N091	1.117	1.115	1.298	1.280	1.242	1.280	1.300	1.304	Cont.	Cont.

A. Mission Description & Budget Item Justification:

This project is required to employ newly developed processing capabilities to tailor the extensive telecommunications resources of the existing Public Switched Network (PSN), which includes the Local Exchange Carrier (LEC) and Inter Exchange Carrier (IEC) Networks, thus enhancing connectivity and survivability of services for essential government users during periods of emergency. Advanced Intelligent Network (AIN) is an evolving PSN capability consisting of signaling systems, switches, computer processing, databases and transmission media. This research will result in the utilization of these components, in a customized set of network services that can be flexibly, rapidly and cost effectively configured by customers upon demand on an as needed basis. Regarding acquisition strategy, work will continue under current contract vehicles.

FY1996 Accomplishments:

- o Evaluate AIN industry developments and capabilities for potential applications to NS/EP telecommunications (\$200K) (1st Qtr - 4th Qtr)
- o Determine AIN relationships to evolving National Communications System (NCS) requirements for advanced intelligent capabilities and data services, define applications for implementation into OMNCS initiatives (\$250K) (1st Qtr - 4th Qtr)
- o Research AIN interoperability with emerging technologies such as Integrated Services Digital Network (ISDN), Asynchronous Transfer Mode (ATM) and Personal Communications (PCS), for potential integrated voice, data, wireline and wireless services (\$250K) (1st Qtr - 4th Qtr)
- o Analyze AIN Bellcore generic requirements for potential NS/EP considerations and influence AIN implementation as the technology becomes standardized (\$220K) (1st Qtr - 4th Qtr)
- o Research mediated access FCC issues for further development of AIN switches and elements (\$197K) (1st Qtr - 4th Qtr)

FY1997 Plans:

- o Research and develop AIN candidate configurations of potential voice and data AIN services in support of NS/EP emerging requirements and those necessary to support emergency operations on the NII (\$225K) (1st Qtr - 4th Qtr)
- o Plan for and demonstrate proof of concept strategies for offering AIN services and demonstrate interoperability across the

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APPROPRIATION/BUDGET ACTIVITY										DATE: February 1997																										
RD&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)					R-1 ITEM NOMENCLATURE					Support of the National Communications System(NCS) / P.E.0303127K																										
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost																									
Advanced Intelligent Network/N091		1.117	1.115	1.298	1.280	1.242	1.280	1.300	1.304	Cont.	Cont.																									
Public Switched Network (PSN) across multiple service providers and with other technologies such as ISDN, ATM and PCS (\$335K) (1st Qtr - 4th Qtr) <ul style="list-style-type: none"> <li>○ Assess AIN survivability, reliability, interoperability and security concerns for NS/EP voice and data applications and influence industry to act on NS/EP concerns (\$275K) (1st Qtr - 4th Qtr)</li> <li>○ Follow-on to FY96 initiatives to plan demonstrations that remain current with planned industry capabilities and issues, and influence the design of AIN services to be responsive to the needs of the NS/EP community (\$280K) (1st Qtr - 4th Qtr) \$1.115M Total</li> </ul> <u>FY1998 Plans:</u> <ul style="list-style-type: none"> <li>○ Identify new intelligent network capability and set 2 and 3 standards applications for NS/EP (\$218K) (1st Qtr - 4th Qtr)</li> <li>○ Conduct proof of concept demonstration of new services as they apply to Government Emergency Telecommunications Service (GETS) (\$645K) (1st Qtr - 4th Qtr)</li> <li>○ Assess AIN integration opportunities with DISN (\$435K) (1st Qtr - 4th Qtr) \$1.298M Total</li> </ul> <u>FY 1999 Plans:</u> <ul style="list-style-type: none"> <li>○ Conduct AIN network interoperability testing across multiple carriers (\$640K) (1st Qtr - 4th Qtr)</li> <li>○ Assess AIN third party implementations for NS/EP (\$205K) (1st Qtr - 4th Qtr)</li> <li>○ Determine AIN applications for GETS Network Management (\$435K) (1st Qtr - 4th Qtr) \$1.280M Total</li> </ul>																																				
<u>B. Program Change Summary</u> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 30%;">FY 1996</th> <th style="text-align: left; width: 30%;">FY 1997</th> <th style="text-align: left; width: 30%;">FY 1998</th> <th style="text-align: left; width: 30%;">FY 1999</th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget (FY 1997)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Appropriated Value</td> <td>1.191</td> <td>1.421</td> <td>1.946</td> </tr> <tr> <td>Adjustments to Appropriated Value</td> <td>1.393</td> <td>1.421</td> <td>1.985</td> </tr> <tr> <td>Adjustments to Budget Year Since FY 97 President's Budget</td> <td>-.276</td> <td>-.306</td> <td></td> </tr> <tr> <td>Current President's Budget (FY 1998)</td> <td>1.117</td> <td>1.115</td> <td>1.298</td> </tr> </tbody> </table>													FY 1996	FY 1997	FY 1998	FY 1999	Previous President's Budget (FY 1997)				Appropriated Value	1.191	1.421	1.946	Adjustments to Appropriated Value	1.393	1.421	1.985	Adjustments to Budget Year Since FY 97 President's Budget	-.276	-.306		Current President's Budget (FY 1998)	1.117	1.115	1.298
FY 1996	FY 1997	FY 1998	FY 1999																																	
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RDTE BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE: February 1997		
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE					
RDT&E, Defense Wide/07				Support of the National Communications System(NCS) /P.E. 0303127K					
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Total Cost
Advanced Intelligent Network/N091	1.117	1.115	1.298	1.280	1.242	1.280	1.300	1.304	Cont.

Change summary Explanation  
Funding: FY96 adjustment due to below threshold reprogramming.  
FY97 adjustment represents an administrative breakout of Project N095, NS/EP Telecommunication Integration Support.  
FY98 and FY99 changes due to realignment of effort to project N095, Telecommunications Integration Support, and revised fiscal guidance.

Schedule: N/A  
Technical: N/A

C. Other Program Funding Summary: N/A

D. Schedule Profile

FY96 - 4th quarter: Contract Award - 1 July 1996  
AIN Multimedia Applications for NS/EP

FY97 - 2nd quarter: Develop AIN Open Network Architecture and Demonstrations

FY98 - 4th quarter: AIN Integration with DISN

FY99 - 4th quarter: AIN Interoperability with GETS demonstration

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**RD/T&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)**

**APPROPRIATION/BUDGET ACTIVITY**  
RDT&E, Defense Wide/07

## **R-1 ITEM NOMENCLATURE**

Support of the National Communications System (NCS) / 0303127K/Advanced Intelligent Network (N091)

DATE: February 1991

### Project Cost Categories

## Engineering & Technical Service

3. Budget Acquisition History and Planning Information (\$000)

	Budget FY1996	Budget FY1997	Budget FY1998	Budget FY1999	Total Program Cont.	Total Program Cont.
Support & Management Organization	393	446	449	440		
Product Development Organization	724	669	849	840		
Total Project	1,117	1,115	1,298	1,280		

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE: February 1997				
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE Support of the National Communications System(NCS) / P.E.0303127K							
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
NS/EP Telecommunications Integration Support/N095		.204	.204	.455	.470	.470	.470	.470	.479	.479	Cont. Cont.

A. Mission Description & Budget Item Justification:

This project is a breakout from project N091, Advanced Intelligent Network. This project will assess the readiness and capabilities of existing and planned NS/EP telecommunications programs, initiatives, services, and emerging technologies to meet national requirements. It will provide essential information for decision-making and assessment of acquisition risks. Develop for consideration by the NCS Committee of Principals (COPs) and the executive agent test and exercise programs and procedures of evaluation of the capability of the nation's telecommunications resources to meet national security or emergency preparedness telecommunications requirements.

FY1996 Accomplishments:

- Develop Test and Evaluation Master Plans (TEMPS) for evaluating program performance of emerging communications technologies (\$100K) (1st Qtr - 4th Qtr)
- Report on test and evaluation on existing NCS NLP and baseline programs designed to meet national requirements. (\$104K) (1st Qtr - 4th Qtr) \$.204M Total

FY1997 Plans:

- Evaluate exercises and training events to determine capabilities needed to respond to NS/EP emergencies. (\$204K) (1st Qtr - 4th Qtr) \$.204M Total

FY1998 Plans:

- Conduct and report on test and evaluation of readiness and capabilities of OMNCS programs, plans and procedures in accordance with NS/EP functional requirements. (\$151K) (1st Qtr - 4th Qtr)
- Provide test and evaluation as required for NCS National Level Program (NLP), primary asset and management system support (\$152K) (1st Qtr - 4th Qtr)
- Assess NS/EP telecommunications required features and their possible expansion for NS/EP telecommunications application. (\$152K) (1st Qtr - 4th Qtr) \$.455M Total

FY1999 Plans:

- Assess emerging technology, existing plans to transition, and the applicability of industry services and assets for NS/EP telecommunications demonstrations (\$156K) (1st Qtr - 4th Qtr)

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RD&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997																															
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					Support of the National Communications System (NCS) / P.E. 0303127K																															
RDT&E, Defense Wide/07																																									
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost																															
NS/EP Telecommunications Integration Support/N095	.204	.204	.455	.470	.470	.470	.470	.479	.479	.479	Cont.																														
<ul style="list-style-type: none"> <li>○ Assess the utility of NS/EP communications through associated technology demonstrations (\$157K) (1st Qtr - 4th Qtr)</li> <li>○ Provide test and evaluation assessments in accordance with the NS/EP architecture and NCS strategic plan on programs, initiatives, products and services (\$157K) (1st Qtr - 4th Qtr) \$ .470M Total</li> </ul>																																									
<p>B. Program Change Summary</p> <table> <thead> <tr> <th></th> <th>FY 1996</th> <th>FY 1997</th> <th>FY 1998</th> <th>FY 1999</th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget (FY 1997)</td> <td>*</td> <td>*</td> <td>*</td> <td>*</td> </tr> <tr> <td>Appropriated Value</td> <td></td> <td></td> <td></td> <td>*</td> </tr> <tr> <td>Adjustments to Appropriated Value</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Adjustments to Budget Year Since FY 97 President's Budget</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Current Budget Submit/President's Budget (FY 1998)</td> <td></td> <td>.204</td> <td>.204</td> <td>.455</td> </tr> </tbody> </table> <p>Change Summary Explanation  * This project is an administrative breakout from Project N091, Advanced Intelligent Network.</p>													FY 1996	FY 1997	FY 1998	FY 1999	Previous President's Budget (FY 1997)	*	*	*	*	Appropriated Value				*	Adjustments to Appropriated Value					Adjustments to Budget Year Since FY 97 President's Budget					Current Budget Submit/President's Budget (FY 1998)		.204	.204	.455
	FY 1996	FY 1997	FY 1998	FY 1999																																					
Previous President's Budget (FY 1997)	*	*	*	*																																					
Appropriated Value				*																																					
Adjustments to Appropriated Value																																									
Adjustments to Budget Year Since FY 97 President's Budget																																									
Current Budget Submit/President's Budget (FY 1998)		.204	.204	.455																																					
C. Other Program Funding Summary:	N/A																																								
D. Schedule Profile																																									
	FY98	Contract Award - 1 October 1998																																							
	FY99	Contract Award - 1 October 1999																																							

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APPROPRIATION/BUDGET ACTIVITY		RDTE PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)		DATE : February 1997	
RDTE, Defense Wide/07		Support of the National Communications System (NCS) / 0303127K/NS/EP Telecomm Integration Support/N095			
A. Project Cost Breakdown	(\$000)				
Project Cost Categories		<u>FY1996</u>	<u>FY1997</u>	<u>FY1998</u>	<u>FY1999</u>
Engineering & Technical Service		204	204	455	470
Total		204	204	455	470
B. Budget Acquisition History and Planning Information	(\$000)				
Performing Organizations		Budget	Budget	Budget	Budget
		<u>FY1996</u>	<u>FY1997</u>	<u>FY1998</u>	<u>FY1999</u>
Support & Management Organization		50	50	91	94
Product Development Organization		154	154	364	376
Total Project		204	204	455	470
					Total
					Program
					Cont.
					Cont.

## RDTE BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

APPROPRIATION/BUDGET ACTIVITY							R-1 ITEM NOMENCLATURE				DATE: February 1997	
RDTE, Defense Wide/07							Defense Message System/PE 0303129K					
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost	
Project H80, Defense Message System (DMS)	*	1.353	0	0	0	0	0	0	0	0	1.353	

A. Mission Description & Budget Item Justification: This project is not a new start. Prior to FY 1997, it was funded in PE0303126K. The purpose of this project is to provide system engineering to ensure that JS and OSD (C3I) validated messaging requirements are satisfied through the use of a COTS-based, multi-level secure messaging and directory service. The DMS provides the defense community with a more interoperable, cost effective messaging/directory service than that which is in place today. Current support is focused on developing secure messaging, directory, and management services through requirements definition and refinement; target component Developmental, Initial and Final Operational Test and Evaluation (DT&E, IOT&E and FOT&E); developing transitional interoperability requirements and components/services; technology insertion and service demonstrations; and influencing industry to include DMS features as part of their standard product offerings. This program element is under budget activity 07 because it supports operational systems development.

(U) FY 1996 Accomplishments:

Work is performed in PE0303126K.

(U) FY 1997 Plans:

- o Perform engineering, specification development, and deployment assistance to support LRD, IOC, and Post IOC for sensitive but unclassified messaging, directory, security, and service management capabilities across strategic as well as tactical environments, and extending beyond DMS to include EC/EDI, GCCS/GCSS, DTS, and others. (\$652K) (1st - 4th Qtr)
- o Support the Post IOC test and evaluation effort through Technical Insertion Environment scenario development, execution, & results analysis and finalization of revisions to Functional Security and Performance (FSP) criteria and compliance definition. (\$251K) (3rd - 4th Qtr)
- o Perform system lifecycle/evolution engineering to account for growth, policy and requirements changes, MISSI and commercial product changes. (\$250K) (1st - 4th Qtr)
- o Develop and promote DOD/DMS requirements and positions on data communications protocol issues via military and civilian, national and international standards fora. (\$200K) (1st - 4th Qtr)

\$1.353M Total

(U) FY 1998 Plans: This project has transitioned to O&M appropriation.

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE: February 1997		
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE					
RDT&E, Defense Wide/07				Defense Message System/PE 0303129K					
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete
Project H80 Defense Message System (DMS)	*	1.353	0	0	0	0	0	0	1.353
B. Program Change Summary				<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>		
Previous President's Budget (FY 1997)	*	2.532	2.674	2.532	2.532	2.745	2.745		
Appropriated Value									
Adjustments to Appropriated Value				-1.179					
Adjustments to Budget Year Since FY 1997 President's Budget					-1.179				
Current Budget Submit/President's Budget (FY 1998)						-2.674	-2.745		
Change Summary Explanation:				1.353		0	0		
Funding:	* FY96 : Work is performed in PE0303126K. FY97 reduction is due to Congressional adjustment to Defense-wide Investment Appropriation and below threshold reprogramming. FY98 and FY99: Project has transitioned to O&M appropriation.								
C. Other Program Funding Summary				<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>	<u>FY00</u>	<u>FY01</u>
O&M	20.510	35.620	37.109	38.967	44.289	24.228	17.642	18.008	18.433
PROCUREMENT	27.825	41.362	44.470	29.719			20.592	21.076	21.606
D. Schedule Profile									
(U) FY 1997				Engineering Milestones: Finalized Tactical Standardized Prototype(4 Qtr)					

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)						DATE : February 1997
APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE			
RDT&E, Defense Wide/07			Defense Message System/PE 0303129K			
A. Project Cost Breakdown	FY96	FY97	FY98	FY99		
Project Cost Categories (\$000)						
a. Engineering and Technical Services	0	1,353	0	0		
Total	0	1,353	0	0		
B. Budget Acquisition History and Planning Information						
Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Budget FY96	Budget FY97
Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Budget FY98	Budget FY99
Product Development Organizations : Other Contracts				0	251	0
Support and Management Organizations:				0	0	0
MITRE	Procurement Work Directive (PWD)			0	1,102	0
Total				0	1,353	0
						1,353

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE: February 1997		
APPROPRIATION/BUDGET ACTIVITY							R-1 ITEM NOMENCLATURE		
RDT&E, Defense Wide/07							Minimum Essential Emergency Communications Network		
							(MEECN) /0303131K		
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete
Total Program Element (PE)	2.620	2.110	2.381	2.450	2.566	2.686	2.743	2.862	Contg
Strategic C3 Support/T70	2.361	1.882	2.127	2.179	2.254	2.329	2.379	2.479	Contg
Contingency Planning for the President/T71	.259	.228	.254	.271	.312	.357	.364	.383	Contg
									Contg

A. Mission Description and Budget Item Justification:

This program focuses on ensuring the implementation of national policy requiring Nuclear Command, Control and Communications (NC3) systems; support positive control of nuclear forces, and connectivity between National Command Authorities (NCA) and strategic and other appropriate forces to assure adequate command and control is maintained throughout all phases of conflict and instability. This support also provides informed decision-making linkage between the NCA and the Commanders-in-Chief (CINC) of the Unified and Specified Commands. DISA performs this task as Nuclear C3 (NC3) Systems Engineer. It specifically ensures a balanced, integrated capability is maintained. This project provides direct long range and specialized support to ASD(C3I) and Joint Staff (JS) for determining which programs should be supported and/or canceled, as well as supports fail safe and risk reduction. This program element is under Budget Activity 07 because it involves efforts supporting operational systems development.

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997		
APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE									
RDT&E, Defense Wide/07			Minimum Essential Emergency Communications Network (MEECN) / 0303131K									
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost	Contg	Contg
Strategic C3 Support/T70	2.361	1.882	2.127	2.179	2.254	2.329	2.379	2.479				

A. Mission Description & Budget Item Justification:

This project has four elements: strategic planning, operational assessments, communications plans, and engineering. Together, these elements perform all of the functions of the NC3 systems engineer and all of the NCA and Nuclear C3 support for ASD(C3I). The first element is Strategic Planning which is done for ASD(C3I) and the Joint Staff. These are the long range plans and vulnerability assessments done to ensure NCA and NC3 are always adequate under all conditions of stress or war. It evaluates the operational capability for the Nuclear Command and Control System (NCCS), i.e., strengths and weaknesses and determines the best investment strategy to evolve the current NCCS to achieve the desired capability. Threats--from terrorist activities--to regional--to global are considered. Fiscal constraints and other top level guidance are also significant factors influencing these plans. The second element is Operational Assessments of the fielded C3 systems and weapons platforms. This assessment is the sole means for positive verification of the communications plans, procedures, operations orders, training, equipment and system configuration from end-to-end. It includes both strategic, theater-to-national level C3 interfaces into the NC3 systems. The tests are performed in an operational setting with Joint Chiefs of Staff (JCS), CINC and nuclear forces worldwide. The third element of this project is to maximize the operational readiness of the National Military Command System (NMCS) by developing communications plans, procedures, operations orders and Battle Staff certification, and keeping these plans and procedures accurate as policy and forces change. Under this element, Battle Staff proficiency is verified. The fourth element of this project provides engineering guidance and participates in all NC3 system life cycle systems engineering related functions. It includes mission and functional technical requirements definition; alternative designs and solutions; program policy and guidance; subsystem and network integration; modeling, test and evaluation; development, deployment, installation and problem isolation. This element resolves design, engineering, performance and interoperability issues for critical strategic systems.

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RDTE BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE : February 1997	
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					Minimum Essential Emergency Communications Network (MEECN) /0303131K	
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost	Contg
Strategic C3 Support/T70	2.361	1.882	2.127	2.179	2.254	2.329	2.379	2.479	Contg	Contg	Contg
(U) <u>FY 1996 Accomplishments:</u>											
o Reduced NC3 Operational Assessments/Positive Command and Control (Sep 96; \$1,238K).											
o Selected communications plans updating and certifications (Sep 96; \$433K).											
o Identified NC3 communications requirement for Proliferation (Sep 96; \$529K).											
o Commenced validating new architecture implementing Nuclear Posture Review (NPR) recommendations (Sep 96; \$161K).											
\$2.361M Total											
(U) <u>FY 1997 Plans:</u>											
o Continue reduced NC3 Operational Assessments/Positive Command and Control (Sep 97; \$1,092K).											
o Continue selected communications plans updating and certifications (Sep 97; \$320K).											
o Complete NC3 communications requirement for Proliferation (Sep 97; \$414K).											
o Validate new architecture to implement Commercial-Off-The-Shelf (COTS) equipment into NC3 (Sep 97; \$56K).											
\$1.882M Total											
(U) <u>FY 1998 Plans:</u>											
o Continue reduced NC3 Operational Assessments/Positive Command and Control (Sep 98; \$1,212K).											
o Continue selected communications plans updating and certifications (Sep 98; \$340K).											
o Complete NC3 communication requirement for Proliferation (Sep 98; \$447K).											
o Validate new architecture to implement COTS equipment into NC3 (Sep 98; \$128K).											
\$2.127M Total											

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RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)								DATE: February 1997		
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE						
				Minimum Essential Emergency Communications Network (MEECN) /0303131K						
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
Strategic C3 Support/T70	2.361	1.882	2.127	2.179	2.254	2.329	2.379	2.479	Contg	Contg

(U) FY 1999 Plans:

- o Continue reduced NC3 Operational Assessments/Positive Command and Control (Sep 99; \$1,155K).
- o Continue selected communications plans updating and certifications (Sep 99; \$545K).
- o Complete NC3 communication requirement for Proliferation (Sep 99; \$349K).
- o Validate new architecture to implement COTS equipment into NC3 (Sep 99; \$130K).

\$2.179M Total

Acquisition strategy: MITRE Corporation, McLean, VA; Aerospace Systems, Inc., Arlington, VA; Sciences Applications International Corporation (SAIC), McLean, VA; Naval Space and Warfare Systems Command (SPAWAR), Washington, DC.

B. Program Change Summary:

	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>
Previous President's Budget (FY97)	2.361	2.075	2.227	2.340
Appropriated Value	2.047	2.075		
Adjustments to Appropriated Value	+.314	-.193		
Adjustments to Budget Years Since FY97 President's Budget				
Current Budget Submit/President's Budget (FY98)	2.361	1.882	2.127	2.179
Change Summary Explanation:				
FY96 increase due to below threshold reprogramming.				
FY97 decrease due to congressional adjustment to Defense-wide investment appropriation.				
FY98 and FY99 decrease due to revised fiscal guidance.				



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APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense Wide/07		RDTE PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)			DATE: February 1997		
		R-1 ITEM NOMENCLATURE Minimum Essential Emergency Communications Network (MEECN) / 0303131K/Strategic C3 Support (R70)					
A. Project Cost Breakdown: (\$000)							
Project Cost Categories		<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>		
a. Systems Engineering		2,361	1,882	2,127	2,179		
TOTAL		2,361	1,882	2,127	2,179		
B. Budget Acquisition History and Planning Information:							
Support and Management Organizations							
Contractor or Government	Contract Method/Type	Award or Obligation Date	Performing Activity	Project Office	Prior to FY96	Budget FY97	Budget FY98
Performing Activity	or Funding Vehicle	<u>EAC</u>	<u>EAC</u>	<u>EAC</u>	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>
Multiple Performing Activities	SS/C CPAF CPFF MIPR WR				2,361	1,882	2,127
TOTAL PROJECT					2,361	1,882	2,127
							2,179

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RDTE&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)										DATE: February 1997																																																			
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE					Minimum Essential Emergency Communications Network (MEECN) / 0303131K																																																			
COST (in millions)		FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost																																																		
Contingency Planning for the President (CPP) / T71		.259	.228	.254	.271	.312	.357	.364	.383	Contng	Contng																																																		
A. Mission Description & Budget Item Justification:	All aspects of this project are classified and require special access. Therefore, information on this project is not contained in this document but can be obtained upon request.																																																												
B. Program Change Summary:	<table> <thead> <tr> <th></th> <th>FY96</th> <th>FY97</th> <th>FY98</th> <th>FY99</th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget (FY97)</td> <td>.259</td> <td>.236</td> <td>.255</td> <td>.272</td> </tr> <tr> <td>Appropriated Value</td> <td>.222</td> <td>.236</td> <td></td> <td></td> </tr> <tr> <td>Adjustments to Appropriated Value</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Adjustments to Budget Year Since FY97 President's Budget</td> <td>.037</td> <td>-.008</td> <td></td> <td></td> </tr> <tr> <td>Current Budget Submit/President's Budget (FY98)</td> <td>.259</td> <td>.228</td> <td>.254</td> <td>.271</td> </tr> <tr> <td>Change Summary Explanation:</td> <td colspan="4"></td></tr> <tr> <td>FY96 change due to below threshold reprogramming.</td><td colspan="4"></td></tr> <tr> <td>FY97 decrease due to Congressional adjustment to Defense-wide investment appropriation.</td><td colspan="4"></td></tr> <tr> <td>FY98-99 decrease due to revised fiscal guidance.</td><td colspan="4"></td></tr> </tbody> </table>												FY96	FY97	FY98	FY99	Previous President's Budget (FY97)	.259	.236	.255	.272	Appropriated Value	.222	.236			Adjustments to Appropriated Value					Adjustments to Budget Year Since FY97 President's Budget	.037	-.008			Current Budget Submit/President's Budget (FY98)	.259	.228	.254	.271	Change Summary Explanation:					FY96 change due to below threshold reprogramming.					FY97 decrease due to Congressional adjustment to Defense-wide investment appropriation.					FY98-99 decrease due to revised fiscal guidance.				
	FY96	FY97	FY98	FY99																																																									
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C. Other Program Funding Summary:	Information can be provided upon request.																																																												
D. Schedule Profile:	N/A																																																												

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RDTEC PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)		DATE: February 1997			
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE			
RDTEC, Defense Wide/07		Minimum Essential Emergency Communications Network (MEECN) / 0303131K/Contingency Planning for the President (T71)			
A. Project Cost Breakdown: (\$000)		<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	<u>FY99</u>
Project Cost Categories					
a. Systems Engineering		259	228	254	271
TOTAL		259	228	254	271
B. Budget Acquisition History and Planning Information:					
Support and Management Organizations					
Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Budget FY96
Miscellaneous				259	228
Government Furnished Property: N/A				254	271
TOTAL PROJECT				259	228
					254
					271

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RDTE BUDGET ITEM JUSTIFICATION (R-2 Exhibit)							DATE: February 1997			
APPROPRIATION/BUDGET ACTIVITY							R-1 ITEM NOMENCLATURE			
RDTE, Defense Wide/07							C4I for the Warrior/0303149K			
COST (in millions)	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	Cost to Complete	Total Cost
Joint C3I Surveillance & Recon./D8A	0	2.851	0	0	0	0	0	0	0	2.851

A. Mission Description & Budget Item Justification: The Joint Command, Control, Communications, Computers, Intelligence Surveillance and Reconnaissance (C4ISR) Battle Center will assimilate demonstrations and experiments of large scale engineering required for architecture development of Joint warfighting systems integration which leverage C4ISR. The Center grew out of the FY1995 Chairman of the Joint Chiefs of Staff (CJCS) initiative to address the need to provide comprehensive joint warfighting capability that maintains a competitive military advantage dependent on the ability to effectively field evolutionary systems and equipment which assure joint operational capability dominance by quickly organizing and testing innovative C4ISR concepts. The Center will also ensure that as new C4ISR concepts surface, these concepts will be developed to share all C4ISR information with precision force generators which will engender a powerful environment for joint operational innovations. Industry driven technology advancements dictate rapid insertion into the DoD C4ISR infrastructure to maintain this competitive advantage. The Center will support experiments in mission with actual battle scenarios and assessment specific parameters by utilizing the latest technology insertion and applications to provide a consistently improving state of readiness for the joint warfighter. This program element is under Budget Activity 07 because it supports operational systems development.

(U) FY 1996 Accomplishments: N/A

(U) FY 1997 Plan:

- o Establish the technical and operational infrastructure organic/unique to the Joint C4ISR Battle Center mission and functions. (Completed) (\$2.851M Total)

(U) FY 1998 Plans:

- o This project has been transferred to the Joint Staff beginning in FY 1998.

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RDTE PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)		DATE: February 1997		
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE			
RDT&E, Defense Wide/07		C4I for the Warrior/0303149K/Joint C3I Surveillance & Recon./D8A		
A. Project Cost Breakdown (\$000)	<u>FY96</u>	<u>FY97</u>	<u>FY98</u>	
Systems Engineering	0	2,851	0	
			0	
B. Budget Acquisition History and Planning Information:				
Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity <u>EAC</u>	
Project Office <u>EAC</u>	Prior to <u>FY96</u>	Budget <u>FY97</u>	Budget <u>FY98</u>	
All Other Contracts		0	2,851	
		0	0	
		0	0	
Subtotal Contracts		0	2,851	
In House Engineering & Technical Support: N/A				
TOTAL PROJECT	0	0	2,851	
			0	
			0	

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